Issue 06/10

Newspaper post

TheSynapse

The Medical Professionals Network

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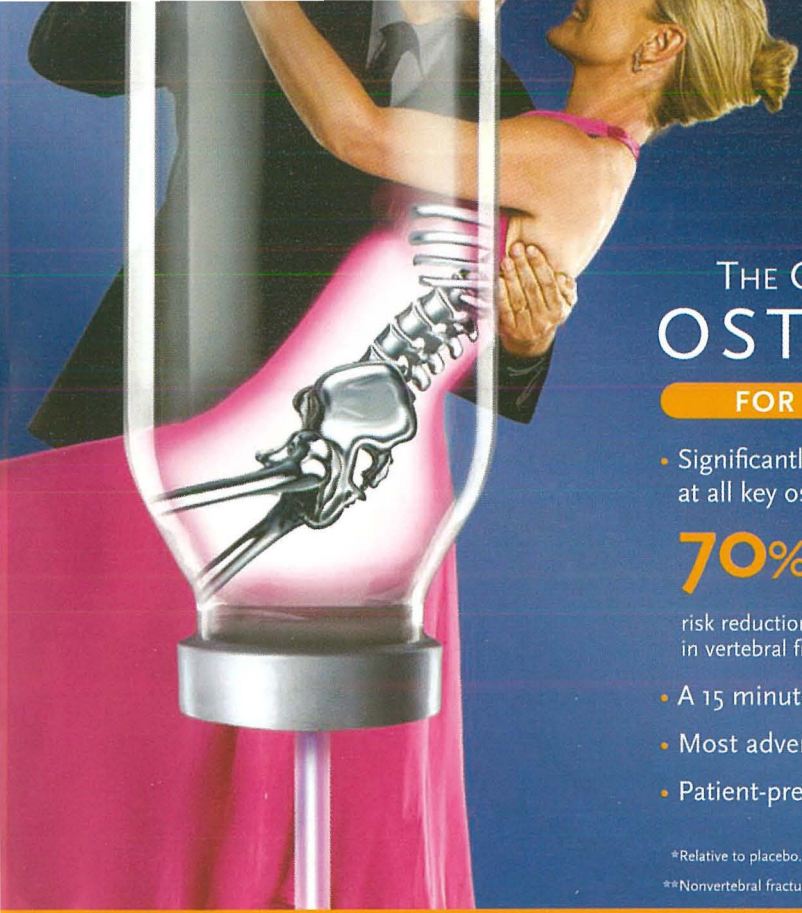

OTHER INDICATIONS:
- Treatment of GIO
- Male osteoporosis

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DOSAGE AND ADMINISTRATION: Osteoporosis: A single intravenous infusion of 5 mg Aclasta administered once a year. In patients with a recent low-trauma hip fracture, it is recommended to give the Aclasta infusion two or more weeks after hip fracture repair. Paget's Disease: A single intravenous infusion of 5 mg Aclasta. Specific re treatment data are not available for Paget's disease. Aclasta is administered via a vented infusion line and given at a constant infusion rate. The infusion time must not be less than 15 minutes. Adequate calcium and vitamin D are recommended in association with Aclasta administration. In patients with recent low-trauma hip fracture a loading dose of 50,000 to 125,000 IU of Vitamin D is recommended prior to the first Aclasta infusion. No dose adjustment in patients with creatinine clearance ≥35 mL/min, or in patients with hepatic impairment, or in elderly patients. The safety and efficacy of Aclasta in children and adolescents below 18 years of age has not been established.

CONTRAINDICATIONS: Hypersensitivity to zoledronic acid or to any of the excipients or to any bisphosphonate; hypocalcaemia; pregnancy; lactation.

PRECAUTIONS AND WARNINGS: Serum creatinine should be measured before each Aclasta dose. Aclasta should not be used in patients with creatinine clearance <35 ml/min. Transient increase in serum creatinine may be greater in patients with underlying impaired renal function. Monitoring of serum creatinine should be considered in at-risk patients. Patients must be appropriately hydrated prior to administration of Aclasta, especially important for the elderly and for patients receiving diuretic therapy. Use with caution in conjunction with medicinal products that can impact renal function. A single dose of Aclasta should not exceed 5mg and the duration of infusion should be at least 15 minutes. Pre-existing hypocalcaemia and other disturbances of mineral metabolism must be treated by adequate intake of calcium and vitamin D before initiating therapy with Aclasta. It is strongly advised that patients with Paget's disease receive supplemental calcium and vitamin D. Measurement of serum calcium before infusion is recommended for patients with Paget's disease. Severe and occasionally incapacitating bone, joint and/or muscle pain have been infrequently reported with bisphosphonate therapy. A patient being treated with Zometa should not be treated with Aclasta. As a precaution against osteonecrosis of the jaw (ONJ) a dental examination with appropriate preventive dentistry should be considered prior to treatment in patients with concomitant risk factors (e.g. cancer, chemotherapy, corticosteroids, poor oral hygiene). While on treatment, these patients should avoid invasive dental procedures if possible. For patients requiring dental procedures, there are no data available to suggest whether discontinuation of bisphosphonate treatment reduces the risk of osteonecrosis of the jaw. Aclasta is not recommended in women of childbearing potential.

INTERACTIONS: Specific drug-drug interaction studies have not been conducted with zoledronic acid. Caution is recommended when Aclasta is used concomitantly with drugs that can significantly impact renal function, such as aminoglycosides and diuretics that can cause dehydration. In patients with renal impairment, the systemic exposure to concomitant medicinal products that are primarily excreted via the kidney may increase.

ADVERSE REACTIONS: The incidence of adverse reactions (e.g. fever, myalgia, flu-like symptoms, arthralgia and headache) are greatest with the first infusion and decrease markedly with subsequent infusions. The majority of these reactions occur within the first three days and were mild to moderate and resolved within three days of the event onset. The incidence of these adverse reactions can be reduced with the administration of paracetamol or ibuprofen shortly following Aclasta administration. Very common: Fever. Common: Flu-like symptoms, chills, fatigue, pain, asthenia, malaise, arthralgia, myalgia, bone pain, back pain, pain in extremity, vomiting, nausea, headache, dizziness, atrial fibrillation, hypocalcaemia†, ocular hyperaemia, diarrhoea, increased C-reactive protein, infusion site reactions. Uncommon: Hypertension, flushing, palpitations and others. Not known: Scleritis, orbital inflammation, hypotension, renal impairment, osteonecrosis of the jaw, dehydration secondary to post dose symptoms, hypersensitivity reactions
† *Common in Paget's disease only.* Please refer to SmPC for a full list of adverse events.

PACK SIZE: Aclasta is supplied in packs containing one 100ml bottle

LEGAL CATEGORY: POM.

MARKETING AUTHORISATION NUMBER: EU/1/05/308/001.

MARKETING AUTHORISATION HOLDER: Novartis Europharm Limited, Wimblehurst Road, Horsham, West Sussex, RH12 5AB, United Kingdom.

Consult full Summary of Product Characteristics (SmPC) before prescribing. Full prescribing information is available upon request from: Novartis Pharma, P.O. Box 124, Valletta VLT 1000, Malta. Tel +356 22983217. (vsn 2010-MT-001 ACL 18-05-2010)

References: **1.** Aclasta SmPC. Novartis Europharm Ltd. **2.** Black DM, Delmas PD, Eastell R, et al; for the HORIZON Pivotal Fracture Trial. Once-yearly zoledronic acid for treatment of postmenopausal osteoporosis. N Engl J Med. 2007;356:1809-1822. **3.** Saag K, Lindsay R, Kriegman A, Beamer E, Zhou W. A single zoledronic acid infusion reduces bone resorption markers more rapidly than weekly oral alendronate in postmenopausal women with low bone mineral density. Bone. 2007;40:1238-1243. **4.** McClung M, Recker R, Miller P, et al. Intravenous zoledronic acid 5mg in the treatment of postmenopausal women with low bone density previously treated with alendronate. Bone. 2007;41:122-128.

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ACL Ad 11/10 MT

Wherever I cast my glance I see roller coaster debates. From divorce to the mushrooming of gentleman's clubs ... from stewardship of natural water resources to IVF fertilisation ... we have debates to suit all tastes reaching us through every possible channel, be it a traditional radio or an iPhone application. At least these may provide a more intense aleniation than the usual fireworks or electoral debates in the village square! The nature of this magazine quite rightly restricts my theme to IVF fertilisation. Notwithstanding the fact that I do not hold a PhD in neonatology, I will still jut in a comment on this. I will not delve in my strong opposition of the storage of embryos. I will only say that human nature being what it is, it tends to be quite Macciavellian in the fact that the ends quite often (but not quite rightly) justify the means. Maybe having a multiple pregnancy through an IVF procedure may discourage couples to implant their 'extra' embryos which have been stored just in case. According to the draft IVF legislation currently being discussed this should not be problem. Why? Because these embryos are then offered for adoption. But if these are not adopted? I bet my bottom buck that they will share the same drain being used by other countries! Believe you me, this is what I envisage will happen. Never mind the lip services which we are being offered.

And this reminds me of the other ongoing never-ending debate on pluripotency & stem cells? We have initially been shown a picture that pluripotency can only be achieved from embryonic stem cells. However time has shown quite the contrary with multipotency or better still pluripotency being demonstrated by a wide range of sources, including the nose, umbilical cord, deciduous teeth and so on. And later on a major milestone was the research in induced pluripotent stem cells. And interestingly, to add to all this, only last November, research published in *Nature News* has demonstrated that scientists have managed to create adult blood progenitors directly from adult skin cells, skipping the induced pluripotent 'embryonic' stage. And since pluripotency is bypassed, the risk of them forming teratomas when implanted into patients is reduced. This is also considered to be a major breakthrough since when erythrocytes are created from pluripotent embryonic stem cells these do not make the adult form of haemoglobin (but the fetal form).

Lastly I would like to revert back to the local scenario. The government merits a round of procrastinated applause (excuse my play of words) at having published the National Sexual Health Policy during the past few weeks. Although the promised €200,000 fund severely fall short of the projected €1,500,000 needed to implement such policy, it is always a step in the right direction. Yet another recent achievement by the government is that the breast screening programme is now being extended to Gozo, whilst, in Malta, a second mammography machine will be purchased to increase the screening rate.

I couldn't wind my editorial before jotting a couple of comments on the establishment of the new Competition and Consumer Affairs Authority. It has long been rumoured that the Medicines Authority had to form part of this super authority, this being formally mentioned in the last Budget (with one of the functions of the authority to be to, and I am quoting ad verbatim, 'protect public health through the regulation of medicinal products and pharmaceutical activities', this being exactly the Mission Statement of the Medicines Authority). However it has recently been announced that this new Authority will be formed through an amalgamation of the Malta Standards Authority, the Consumer and Competition Department and the National Laboratory. So the regulation of medicinal products and pharmaceutical activities will be separate to that of the Competition and Consumer Affairs Authority ... at least for now ...

Ian C Ellul

Published by Medical Portals Ltd.
The Professional Services Centre
Guzi Cutajar street
Dingli, Malta

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Editor: Wilfred Galea

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Graphic Designer: - Jeff Galea

Printer - Europrint Ltd.

NEW INDICATION

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IN CONJUNCTION WITH CORRECTION OF HER OTHER RISK FACTORS*

† NOTE: JUPITER used CRESTOR 20mg. The recommended start dose for hypercholesterolaemia is 5 or 10mg (refer to SPC)

* modifiable risk factors include smoking cessation, exercise, weight loss and diet

Abbreviated Prescribing Information CRESTOR®. Refer to the full Summary of Product Characteristics (SPC) before prescribing. **Presentation:** Film-coated tablets containing 5mg, 10mg, 20mg, or 40mg of rosuvastatin. **Indications:** In patients unresponsive to diet and other non-pharmacological measures, CRESTOR is indicated for primary hypercholesterolaemia (including heterozygous familial hypercholesterolaemia), homozygous familial hypercholesterolaemia, or mixed dyslipidaemia. Prevention of cardiovascular events in patients who are estimated to have a high risk for a first cardiovascular event as an adjunct to correction of other risk factors. **Dosage:** *Treatment of hypercholesterolaemia.* Recommended start dose is 5 or 10 mg daily (including those being switched from other statins). Choice of start dose should take into account the individual patient's cholesterol level and future cardiovascular risk and potential risk for adverse reactions. A dose adjustment to the next dose level can be made after 4 weeks, if necessary. Maximum daily dose is 40mg. A final titration to the maximum dose of 40 mg should only be considered in patients with severe hypercholesterolaemia at high cardiovascular risk (in particular those with familial hypercholesterolaemia), who do not achieve their treatment goal on 20 mg, and in whom routine follow-up will be performed. Specialist supervision is recommended when the 40 mg dose is initiated – refer to SPC. Doses may be given at any time of the day with or without food. *Elderly:* A start dose of 5 mg is recommended in patients >70 years. No other dose adjustment is necessary in relation to age. *Dosage in patients with renal insufficiency:* Recommended start dose is 5 mg in patients with moderate renal impairment (creatinine clearance <60 ml/min). The 40 mg dose is contraindicated in patients with moderate renal impairment. The use of CRESTOR in patients with severe renal impairment is contraindicated for all doses. *Children and adolescents 10-17 years of age:* Paediatric use should only be carried out by specialists - refer to SPC. In heterozygous familial hypercholesterolaemia, the usual start dose is 5mg daily, usual dose range is 5-20mg daily. The 40mg dose is not suitable for paediatric patients. *Children under 10 years:* Safety and efficacy not established. *Race:* Increased systemic exposure in Asian subjects. Recommended starting dose 5mg. CRESTOR 40mg is contraindicated in such patients. *Dosage in patients with pre-disposing factors to myopathy:* The recommended start dose is 5 mg in these patients. The 40 mg dose is contraindicated in some of these patients (see Contraindications). Prevention of cardiovascular events: the dose used in the cardiovascular events risk reduction study was 20mg. **Contra-indications:** Hypersensitivity to any of the ingredients; active liver disease or unexplained persistent elevations in serum transaminases and any serum transaminase > 3 x upper limit of normal; severe renal impairment; myopathy; concomitant ciclosporin; pregnancy and breast-feeding; women of child-bearing potential not using contraception. In addition CRESTOR 40mg is contraindicated with concomitant fibrates, and in patients with predisposing factors for myopathy/rhabdomyolysis including patients of Asian origin (refer to SPC for more information). **Warnings and precautions:** *Renal effects:* Proteinuria which in most cases is transient or intermittent has been observed. Assessment of renal function should be considered during routine follow-up of patients treated with CRESTOR 40 mg. *Muscle effects.* Patients with signs and symptoms of myopathy should be asked to report their symptoms immediately and should have their creatine kinase (CK) levels monitored. CRESTOR should be discontinued if CK levels are markedly elevated or, if muscle symptoms are severe and cause daily discomfort. Risk of myositis and myopathy may increase when administered with certain other drugs (refer to SPC), combination of CRESTOR with gemfibrozil is not recommended for this reason and the benefit versus risk considered when combining CRESTOR with fibrates and niacin. Very rare cases of rhabdomyolysis have been reported with the use of ezetimibe and HMG-CoA reductase inhibitors. CRESTOR, as with other HMG-CoA reductase inhibitors, should be prescribed with caution in patients with pre-disposing factors for myopathy or rhabdomyolysis (see SPC), and if CK levels are significantly elevated at baseline, treatment should not be started. CRESTOR should not be used in patients with an acute, serious condition suggestive of myopathy or predisposing to the development of renal failure secondary to rhabdomyolysis. Rarely, rhabdomyolysis, occasionally associated with impairment of renal function has been reported with all doses and in particular doses >20mg. *Liver effects:* CRESTOR should be used with caution in patients with a history of liver disease and/or alcoholism. Liver function tests should be carried out, prior to, and 3 months following the initiation of treatment. CRESTOR should be discontinued or the dose reduced if the level of serum transaminases is greater than 3-times the upper limit of normal. The reporting rate of serious hepatic events is higher at the 40mg dose. *Interstitial lung disease:* Exceptional cases have been reported with some statins, if it is suspected that a patient has developed interstitial lung disease, statin therapy should be discontinued. *Diabetes Mellitus:* In Patients with fasting glucose 5.6 to 6.9 mmol/L, treatment with Crestor has been associated with an increased risk of diabetes mellitus. The concomitant use of rosuvastatin in HIV patients receiving protease inhibitors is not recommended. Patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency of glucose-galactose malabsorption should not take this medicine. **Pregnancy and lactation:** See contra-indications. **Drug interactions:** Also refer to contraindications. CRESTOR is neither an inhibitor nor inducer of cytochrome P450 isoenzymes. CRESTOR may potentiate the anticoagulant effect of Vitamin K antagonists (e.g. warfarin). Decrease in CRESTOR levels seen when co-administered with erythromycin or antacids containing aluminium and magnesium hydroxide. Increase in oral contraceptive level and hormone replacement therapy level is seen when co-administered with CRESTOR. Concomitant use of CRESTOR and gemfibrozil resulted in a 2-fold increase in rosuvastatin Cmax. Concomitant use of CRESTOR and ezetimibe resulted in no change in AUC or Cmax for either drug; however a pharmacodynamic interaction in terms of adverse events cannot be ruled out. Protease inhibitors. **Undesirable effects:** Common: headache, dizziness, constipation, nausea, abdominal pain, myalgia, asthenia and diabetes in patients with fasting glucose 5.6 to 6.9mmol/L. Uncommon: pruritus, rash and urticaria. Rare: myopathy (including myositis), rhabdomyolysis, hypersensitivity reactions including angioedema, increased hepatic transaminases, pancreatitis. Very rare: jaundice, hepatitis, haematuria, polyneuropathy and memory loss and arthralgia. Other usually transient side effects: elevation in CK levels, proteinuria. Other adverse events listed as unknown: diarrhoea, Stevens-Johnson syndrome, oedema, cough and dyspnoea. The following adverse events have been reported with some statins: depression, sleep disturbances including insomnia and nightmares, sexual dysfunction and exceptional cases of interstitial lung disease, especially with long term therapy. **Legal Category:** POM. **Marketing Authorisation Number (s):** PA 970/57/1. **Marketing Authorisation Holder:** AstraZeneca UK Ltd, 600 Capability Green, Luton, LU1 3LU, UK. Further information is available on request from: AstraZeneca Pharmaceuticals (Ireland) Ltd., College Park House, 20 Nassau Street, Dublin 2 Telephone: (01) 6097100. Updated 06/10 CRESTOR is a trademark of the AstraZeneca group of companies. Licensed from Shionogi & Co Ltd, Osaka, Japan. **Date of preparation:** July 2010. **URN:** 10.0396.

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James Vassallo is a 5th year medical student. He will be enrolling in the Foundation Programme Malta and is interested in pursuing a career in surgery. The co-author of the article is Dr Noel Cassar, higher specialist trainee in General Surgery.

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Contents

Front Page cover

Mallow - Malva Sylvestris

This plant is a perennial, and has a round stem two or three feet high. The flowers are large, numerous, and of purple color.
The mallow is a native of Europe. The whole plant, especially the root, abounds in mucilage.
Medicinal Uses
It possesses the properties common to mucilaginous herbs, and an infusion thereof forms an excellent demulcent in coughs, irritations of the
air-passages, flux, affections of the kidney and bladder, etc. In inflammatory conditions of the external parts, the bruised herb forms an excellent
application, making, as it does, a natural emollient cataplasm.

Photography: **Guido Bonett** ARPS AMPS

Modern Surgical Techniques for the Treatment of Haemorrhoids

by James Vassallo & Noel Cassar

Abstract

It is said that 50% of people have haemorrhoids, and that the rest are liars. While this is definitely an overestimation, this condition is very common, but not always symptomatic. The fundamental principles of management are the exclusion of possible co-existent disease, and treatment tailored to the patient's condition and haemorrhoidal grade. There have been recent advances in surgical therapeutic options and a comparison with the established methods is outlined in the following article.

Haemorrhoids are abnormally enlarged anal cushions containing arteriovenous anastomosis, traditionally described as occurring in the 3, 7, and 11 o'clock positions.[1] The vascular supply is from branches of the superior rectal artery, which are drained by veins (internal venous plexus) emptying into the superior rectal vein. Internal haemorrhoids, which originate from above the dentate line of the anal canal, occur when these anal cushions are dragged down the canal, and are commonly classified by the Goligher grading system[2] (table 1).

Grade 1	Do not prolapse but may bleed
Grade 2	Prolapse on straining and reduce spontaneously
Grade 3	Prolapse on straining and have to be manually reduced
Grade 4	Permanently prolapsed; irreducible

Table 1: The Goligher grading system for haemorrhoidal prolapse

External haemorrhoids are those that originate from varicosities of veins (external venous plexus) draining the territory of the inferior rectal artery, and they occur distal to the dentate line. This article is mainly concerned with internal haemorrhoids though in reality they may co-exist.

Aetiological factors for the development of haemorrhoids are primarily increasing age, passage of hard stool, and raised intra-abdominal pressure. Hence risk factors include a low-fibre diet, prolonged defeacation, and pregnancy. Portal hypertension and anorectal varices are unrelated to haemorrhoids.[3]

The condition can occur at any age. The prevalence in the general population is in the range of around 4.4-24.5%, with a lifetime prevalence of symptomatic haemorrhoids in people over 50 years being around 50%.[4,5] The reluctance to seek medical treatment and lack of symptoms may contribute to an under-estimation of the prevalence.

Haemorrhoids most commonly present with painless rectal bleeding on defeacation.[6] This occurs when the passage of stool (usually when particularly hard) damages the mucosa and fresh (arterial) bleeding occurs from the underlying vessels; the blood is bright red and found on the surface of stool and toilet paper. The surface of the lavatory may be stained with blood as well. Other complaints include prolapsed piles, peri-anal itching, tenesmus, mucous discharge, soiling, and/or skin tags. Haemorrhoids can cause pain due to sphincter spasm when they prolapse, the pain being relieved when they return inside the anal canal. If the muscle spasm interferes with haemorrhoidal blood flow an acute haemorrhoidal crisis can result.[7] If venous outflow is obstructed strangulation can occur, and if not reduced within 1 or 2 hours thrombosis will follow.

If the constriction is tight enough to block the arterial supply, ulceration and gangrene of such haemorrhoid may result. These crises are particularly common in late pregnancy and post-partum, and are usually treated conservatively with ice packs, stool softeners and local analgaesia with resolution usually occurring within 7-14 days.[1] Incision and drainage of the thrombosis with/ without urgent haemorrhoidectomy is an alternative approach and is mostly considered if the patient presents within 3-4 days from onset; it is safe even in pregnancy.[9]

Given a characteristic history of haemorrhoids, the clinician should examine the patient to determine the presence and grade of haemorrhoids. It is fundamental that other anal and colorectal conditions are excluded before attributing all the symptoms to haemorrhoids, especially in the older patients. In a survey conducted in the Netherlands by Koning & Loffeld, 55% of patients with haemorrhoids with a mean age of 67 years had co-existent colorectal pathology.[10] Hence, haemorrhoids presenting with rectal bleeding, especially beyond 40 years, should be referred to a colorectal specialist and investigated adequately. The anus is examined using an anoscope and flexible sigmoidoscopy performed to exclude sigmoidorectal pathology since this is the site of approximately 65% of colorectal tumours. Colonoscopy is usually reserved for cases with a suspicious history and/or unidentified anal source of bleeding.[7] Figure 1 proposes an algorithm for the management of haemorrhoids.

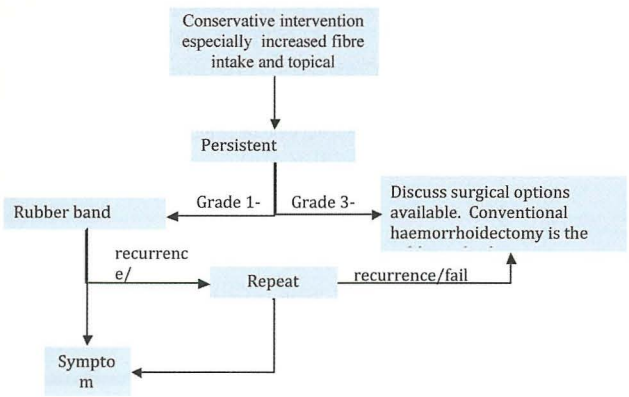


Figure 1: Algorithm for managment of haemorrhoids. Algorithm for management of haemorrhoids. Management of grade 3 haemorrhoids depends on the individual patient characteristics and clinical judgement.

The symptoms and grade of the haemorrhoids guides treatment choice.[6,7] It should be noted that grade and symptoms of haemorrhoids are not significantly correlated.[8] Haemorrhoids should be treated only if they interfere with the health-related quality of life (HRQoL) of the patient; grade alone shouldn't determine treatment choice.

The single most important conservative intervention is increasing the daily fibre intake to >25grams/day via the diet with/without fibre supplements.[5] Together with increasing liquid intake, minimizing time on the toilet, and evacuating soon after feeling the urge, these interventions are aimed at minimising constipation and straining. Bathing in warm water (approximately 40°C) has a soothing effect on anal discomfort; sitz bathing may be unwise since the setup may promote further venous congestion. Venotonic agents, such as diosmin (a flavonoid), used in addition to the above measures may improve the outcome of conservative treatment;[6,11] venotonic injection at the haemorroidal site is also possible but has a poor outcome.[5] For quick relief of symptoms topical agents containing local anaesthetics, steroids, astringents, and/or antiseptics may be satisfactory but prolonged application may induce allergy and maceration.

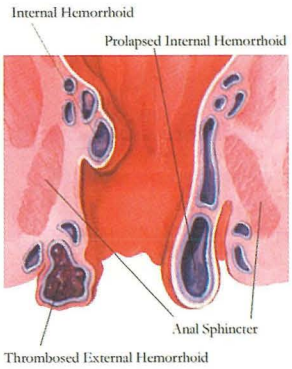
Conservative management is sufficient to improve or resolve symptoms in many patients. Overall, fibre supplementation can decrease severity of symptoms by a mean of around 50% in patients with grade 1-3 haemorrhoids and hence can be sufficient to render the haemorrhoids non-significant as regards to the HRQoL.[12] In fact fibre supplementation is as effective as sclerotherapy.[6] Persistent symptoms beyond 1 month of conservative therapy should prompt consideration regarding more invasive treatment.[7]

Non-operative procedures are usually considered first for persistent grade 1-3 haemorrhoids. The gold-standard is rubber band ligation.[13] It has the lowest recurrence rate at 12 months compared to sclerotherapy and infrared photocoagulation. It is recommended as the first line treatment for grade 1 and 2 haemorrhoids.[14] This technique was originally devised in 1958 by Blaisedell, improved by Barron in 1963, and has undergone significant modifications over time, such as the application of up to 3 bands per session as opposed to one.[6,15] No bowel preparation is required. The equipment typically employs suction, as in the McGown ligator, to draw up the pedicel of the haemorrhoid 1cm or more above the dentate line, and then fires a band which strangulates the blood supply of the haemorrhoid causing it to shrivel off.[5] The patient should be warned of anticipated rectal bleeding at 5-14 days after the procedure. Correct band positioning is essential to minimise post-ligation pain; indeed such a procedure is meant to be performed without local anaesthesia as an outpatient procedure.

Mild/moderate pain occurs in roughly 30% of cases. Success rate is around 75% and the complication rate stands at 0.7%. Recurrence at 4-5 years is around 70% but repeating the procedure is usually sufficient;[5] only 10% of cases would require to proceed to haemorrhoidectomy. A significant bleeding tendency, and treatment with warfarin or heparin are absolute contra-indications for banding. Anti-platelet agents, such as aspirin, should be withdrawn for a week before and after the procedure. When banding is contra-indicated, other non-operative approaches can be offered. The main alternatives are sclerotherapy, bipolar diathermy, Infrared photocoagulation, cryotherapy, and venotonic injection, although these have variable success rates.

For symptomatic grade 3-4 haemorrhoids and haemorrhoids resistant to non-operative procedures,

a surgical approach can be adopted. This is required in only 5-10% of patients.[5] Many techniques for haemorrhoid excision have been described but the most commonly used are the open Milligan-Morgan haemorhoidectomy (MMH) and the closed Ferguson haemorrhoidectomy (FH), which differ in whether the skin wounds are left open to heal by secondary intention or else are sutured primarily in the case of the Ferguson method. MMH may be overall better than FH particularly as regards complication rate.[5] The major considerations accompanying open haemorrhoidectomy are the significant post-operative pain and the protracted recovery time (a minimum of 4 weeks with the MMH). Haemorrhoidectomy may be carried out as a day-case procedure.[15] A post-operative plan for pain relief devised in alliance with the patient is very important for better recovery. Other possible short-term complications include urinary retention, bleeding, and infection; long-term concerns include anal stenosis, feacal incontinence, anal fissure, and fistula-in-ano.[4]



Circular stapled haemorrhoidopexy is another, recently introduced, operative technique for haemorrhoids.[4] This technique is also known as 'procedure for prolapse and haemorrhoids' (PPH) or stapled anopexy/mucosectomy/prolapsectomy. PPH was introduced by Longo A. in 1998 and employs a circular stapling device which removes mucosa and submucosa circumferentially 2-3cm above the dentate line, anastomosing the proximal and distal edges, interrupting the blood supply to the remnant haemorrhoidal tissue.[16] PPH is significantly less painful and allows quicker recovery than MMH, but the recurrence rate may be higher in the long run. One study showed the recurrence rate of PPH vs MMH to be 5.7% vs 1% at 1 year and 8.5% vs 1.5% overall.[5] A recent meta-analysis showed that although the short term benefits of stapled haemorrhoidectomy may be better, the recurrence rate is significantly higher.[17]

A promising procedure is the application of Doppler-guided haemorrhoidal artery ligation (HAL), first described by Morinaga K et al in 1995.[18] This technique can be performed under sedation and/or local anaesthesia and involves a proctoscope with a Doppler transducer integrated in the probe. This allows sequential identification of the position and depth of superior rectal arterial branches (usually 5-7 are found at one level) which are then selectively ligated 2-3cm above the dentate line at two levels 1-1.5cm apart by absorbable sutures via a lateral ligation window within the scope.[16] The interference with the blood supply suppresses the bleeding and volume of the haemorrhoids and symptomatic relief is usually evident within 6-8 weeks. Several studies have found this technique to give good results for grade 2 and 3 haemorrhoids,[19,20] but randomised clinical trials and long term follow up are awaited to compare this technique with the open method. In 2005 the technique was improved with adjunctive recto-anal repair (HAL-RAR). Following ligation, HAL-RAR includes pulling up the prolapsed masses by means of running sutures and hence folding them into the anal canal. Hence symptom relief for grade 3-4 haemorrhoids can be achieved as well.[16]

Other techniques for haemorrhoidectomy include the application of the LigaSure™ System, Harmonic Scalpel, and laser surgery.[5] Dissection and coagulation are achieved via the application of pressure with graded electrical energy or fine oscillatory motion with the LigaSure™ and Harmonic Scalpel instruments respectively, providing precision, a relatively bloodless field, and minimal collateral tissue damage. These methods are not widely used yet but some reports show initial positive results.[21-22]

Conclusion

Conventional haemorrhoidectomy is the gold standard operation against which other haemorrhoidal procedures should be compared. Nonetheless, it has its own post-operative morbidity, including pain, bleeding and infection. This has led to the application of more recent techniques to improve the treatment of this very common disease. General practitioners and colorectal surgeons have to be familiar with these novel treatment options so as to be able to guide their patients appropriately.

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Getting real about Justice and Primary Health Care reform

by Denis Soler

The social determinants of health are the conditions in which people are born, grow, live, work and age, including the health system. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels, which are themselves influenced by policy choices. The social determinants of health are mostly responsible for health inequities - the unfair and avoidable differences in health status seen within and between countries.[1]
Reducing health inequalities is a matter of fairness and social justice. Many people who are currently dying prematurely each year as a result of health inequalities would otherwise have enjoyed, in total, between 1.3 and 2.5 million extra years of life in the UK.
There is a social gradient in health – the lower a person's social position, the worse his or her health. Action should focus on reducing the gradient in health. Health inequalities result from social inequalities. Action on health inequalities requires action across all the social determinants of health. Focusing solely on the most disadvantaged will not reduce health inequalities sufficiently.
To reduce the steepness of the social gradient in health, actions must be universal, but with a scale and intensity that is proportionate to the level of disadvantage.
Action taken to reduce health inequalities will benefit society in many ways. It will have economic benefits in reducing losses from illness associated with health inequalities. These currently account for productivity losses, reduced tax revenue, higher welfare payments and increased treatment costs.
Economic growth is not the most important measure of our country's success. The fair distribution of health, well-being and sustainability are important social goals. Tackling social inequalities in health and tackling climate change must go together.

Reducing health inequalities will require action on six policy objectives:

- Give every child the best start in life
- Enable all children young people and adults to maximise their capabilities and have control over their lives
- Create fair employment and good work for all
- Ensure healthy standard of living for all
- Create and develop healthy and sustainable places and communities
- Strengthen the role and impact of ill health prevention

Delivering these policy objectives will require action by central and local government, and private sectors and community groups. National policies will not work without effective local delivery systems focused on health equity in all policies.

Effective local delivery requires effective participatory decision-making at local level. This can only happen by empowering individuals and local communities.

Amartya Sen's priority is that remediable injustices that are damaging people's lives here and now should be addressed urgently. [2]

That social justice is a powerful determinant of health shines thought the W.H.O 2008 report "Primary Care; Now more than ever[3] and many of the world's most pressing and clearly remediable injustices concern health. **Four sets of Primary Health care Reform are listed:**
1. That health systems contribute to health equity, social justice and the end of exclusion, primarily by moving towards universal access and social health protection i.e. universal coverage reforms
2. Reforms that reorganize health services as primary care, i.e. around people's needs and expectations, so as to make them more socially relevant and more responsive to the changing world while producing better outcomes i.e. service delivery reforms;
a. reforms that secure healthier communities, by integrating public health actions with primary care
b. by pursuing healthy public policies across sectors i.e. public policy reforms
3. Reforms that replace disproportionate reliance on command and control on one hand, and laissez-faire disengagement of the state on the other, by the inclusive, participatory, negotiation-based
4. Leadership required by the complexity of contemporary health systems i.e. leadership reforms.
Sanders and colleagues[4] have pointed out that in the past 2 decades, one of the most important impediments to the implementation of comprehensive primary health care in America has been "neoliberal economic policies and their imposition globally.[5]

We are now witnessing a real attempt by our Government to introduce a radical reform in the Primary Care service in Malta. This can only serve to address health inequities and improve the health of the Maltese population.
While it is understandable that there may be diverse opinions on how best to implement this reform, there is no doubt that whoever believes in putting the patient first should endeavour, in the patients' best interest, to participate in this reform in a positive manner.

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Point of care ultrasound in general practice

by Alexandra Gauci

Ultrasound is one of the most commonly used diagnostic imaging techniques. In the past, like other imaging techniques, ultrasound was performed only by radiologists and even though, with time, the role was extended to radiographers, it still remained within the domain of the radiology department.[1] Nowadays however, its use is being adopted by an ever increasing variety of professionals.[1]

Advances in ultrasound technology have resulted not only in better resolution of images but also in the production of smaller equipment for less cost.[2] Supported by the fact that ultrasound is non-invasive and produces immediate, real-time results, this has allowed diagnostic ultrasound to infiltrate into many specialties of medicine, changing the ways many diseases are diagnosed and managed.[2-4] In fact various authors have labeled ultrasound scanners as the stethoscope of the future, replacing audio by visual data.[5-7] Moreover some authors have also pointed out that sonography has changed the approach to diagnosis of disease from the interpretation of signs and symptoms to interpretation of sonographic signs.[2] Evidence shows that the use of ultrasound imaging is shifting from a domain of solely imaging specialists, which comprises radiologists and radiographers, to that of non-imaging physicians who are utilizing this tool to enhance their practice.[1, 8-10]

With the development of primary care, health reforms and the reassignment of healthcare responsibilities to primary care, the clinics of family doctors are being equipped in a manner that enables them to expand their diagnostic services and cater for conditions which previously were attended to only in secondary care.[2,10] There are many reasons which drive physicians to obtain ultrasound skills and invest in equipment. Apart from the restricted access to ultrasound imaging, the main driving force is the wish to improve patient services by creating a one stop service with a more efficient management.[1] However this does not mean that the presence of an ultrasound scanner in the practice completely eliminates the need for consultation with radiologists. The family physician is still under the obligation to know his limits of competence and consult or refer when necessary. The use of ultrasound as a tool for diagnosis does however affect the ways a family physician manages his patients.[11] Research has shown that the presence of an ultrasound scanner in practice does change the way a practitioner looks at acute and chronic diseases and can have a positive impact in case management outcomes.[2,12]

Since family doctors are the point of contact of patients with health care, they are the gatekeepers to health services and therefore any clinical procedure they know or learn to do competently will be of benefit to their patients.[9,13] Physicians use focused ultrasound examinations mainly to help them in their diagnoses, monitor, screen or to guide invasive clinical procedures.[1,12] The ability to get quicker diagnostic information decreases unnecessary referrals to secondary care. This may well be both cost-effective for the health system, since it avoids the more expensive inpatient management, as well as more convenient for patients who either get managed in house or else get more timely referrals when required.[9,14] In addition to this, family doctors also benefit from the situation since apart from giving better services to patients, who in turn are more compliant, they enhance their technical abilities, are intellectually stimulated and more satisfied in their profession.[7,9] In addition to the mentioned facts, focused imaging by physicians give informed diagnosis and therefore a safe and effective patient management.[1]

The studies evaluating the family doctors' use of diagnostic ultrasound in general practice are very few and the variables they evaluate are different.[10,11,14-16] Head-to-head comparison of their findings is therefore not possible. Generally speaking however, it emerges from the studies that both doctors and patients benefit from office based imaging.[11,14]
It has been shown that in family practice the four main areas where diagnostic ultrasound can be applied are obstetrics and gynecology, abdomen, cardiology and small parts.[9,17] A number of studies have evaluated use, accuracy and teaching methods of obstetric and gynecological ultrasound in family practice and in general, positive conclusions in favour of family doctors have been reached.[7,17-21] In a policy paper the American Academy of Family Physicians considers diagnostic ultrasound as a requirement for proper management of women's health. Abdominal ultrasound in general practice has been shown to be of value in the diagnosis of aortic aneurysm, gall stones, abdominal masses, renal pathology and ascites[9,23] Referrals to secondary care were also shown to decrease as a result of abdominal ultrasound done by family doctors.[23] Other areas benefiting from such use include evaluation of superficial masses, thyroid, prostate, breast and musculoskeletal conditions.[8,9,24]

The issue of suitability of diagnostic ultrasound in the hands of family doctors has been many times a topic for debate.[5,25,26] One of the main concerns was the adequacy of training since no legal restrictions to the use of ultrasound by physicians exist.[9,25,27] In itself ultrasound is harmless to patients if used appropriately, however apart from the fact that some practitioners do not adhere to safety guidelines, patients may be harmed by misinterpretation of ultrasound images resulting in excess false positives and false negatives.[8,27] To address this concern, the Royal College of General Practitioners and Royal College of Radiologists, in a joint effort, established a set of standards for ultrasound training for general practitioners. Studies evaluating the competency of family doctors in performing diagnostic ultrasound have shown that training improved performance.[21]

However although getting training is of utmost importance, this is not enough. There is a general agreement that competency must be maintained.[1] The key issue is that ultrasound imaging requires both expertise and experience.[8]

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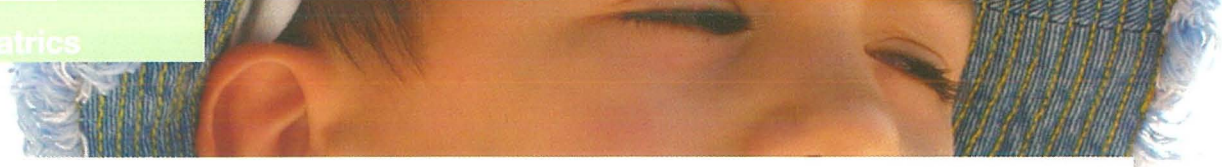


Non-Alcoholic Fatty Liver Disease- An Emerging Problem with Childhood Obesity

by Thomas Attard

Amongst the more clinically serious consequences of the global epidemic in obesity in children is the emergence of non-alcoholic steato-hepatitis (NASH), alternatively known as non-alcoholic fatty liver disease (NAFLD). The incidence of elevated transaminases (ALT, AST) in diverse obese adolescent populations is close to 3%.[1,2] In adults, approximately 30% of obese individuals with elevated transaminases have steatohepatitis and almost half of these individuals will have progressive liver disease. The corresponding incidence of fatty liver in children is unclear; Moran and coworkers first demonstrated the occurrence of severe hepatitis and fibrosis in three obese children with transaminasemia in 1983.[3] This was followed by several other reports defining the incidence of severe fibrosis or cirrhosis in one-third of children undergoing liver biopsy for the same indication.

The disease process evolves from an initial period of increased fat in the liver without inflammation (steatosis) to fat accumulation with inflammation – hepatitis (steatohepatitis). NAFLD represents a complex metabolic disorder strongly associated with visceral adiposity and insulin resistance. It is thought that the disease progresses from an initial fat accumulation in the liver which sets the stage for a 'second hit' including oxidative stress that induces persistent liver injury, leading to fibrosis and cirrhosis.[4] There are clear pointers toward a genetic predisposition to the development of NAFLD, including mutations in the PNPLA3 gene that induces hepatic fat accumulation and inflammation.[5] In fact several epidemiologic studies have shown that familial aggregation of NAFLD is independent of BMI.[6] There are also ethnic differences that point toward genetic, but also potentially dietary factors; the disease being the least prevalent in Afro-Americans despite the high incidence of insulin resistance in this group. Since the disease is less prevalent in females than males, estrogen is considered to have a protective effect.

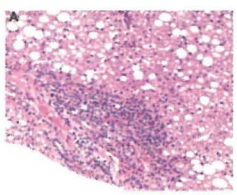
The critical difficulty in defining the prevalence of NAFLD in children has been the inadequacy of diagnostic criteria in obese children and adolescents. The degree of transaminasemia neither distinguishes between steatosis and steatohepatitis, nor does it predict the severity of liver injury. Imaging modalities including hepatic ultrasound and magnetic resonance have limited applicability in determining the presence and severity of fibrosis. To date, liver biopsy remains the only way to determine whether a child has steatosis, steatohepatitis or fibrosis.

Obese children can have alternative causes for transaminasemia and chronic liver disease. It is important to consider these other etiologies including chronic viral hepatitis, Wilson's disease and autoimmune hepatitis (AIH). In particular, hypothyroidism and Cushing's Syndrome are associated with adiposity and can be associated with abnormal liver function tests. Obese children with persistently elevated serum transaminases, particularly those whose elevations remain over twice normal, require liver biopsy to exclude other causes of liver pathology, and to determine the presence and severity of fibrosis or cirrhosis in those with steatohepatitis.

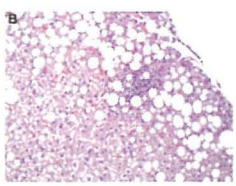
Children with NAFLD are more likely to have obstructive sleep apnea and acanthosis nigricans.[7] Compared to BMI-matched controls, children with NAFLD are likely to have components of the metabolic syndrome including dyslipidemia and hypertension. In fact, hepatic steatosis itself appears to have an adverse impact on cardiovascular outcomes.[8]

The outcome of childhood NAFLD is unknown. There is certainly an increased mortality from cardiovascular disease followed by cancer and liver disease, in part related to the association with the metabolic syndrome. Children with NAFLD have a 13-fold increased risk of

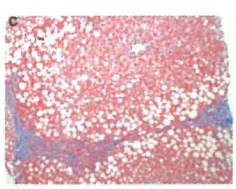
Liver biopsy samples from pediatric patients with NAFLD showing the various histopathological features found in children with NAFLD.



(A) Portal inflammation.



(B) Lobular inflammation.



(C) Bridging fibrosis.

death or needing a liver transplant compared to an age and sex-matched population.[9]. Diagnostic modalities are being studied to determine the subgroup of patients at risk of progression to liver fibrosis and cirrhosis.
Treatment options in pediatric NAFLD include diet and exercise, Vitamin E, ursodiol and the oral hypoglycemic agent metformin. Given the relationship with obesity, targeting pediatric obesity should help in decreasing the burden of pediatric NAFLD. The impact of weight loss in decreasing steatohepatitis in children is however, unknown. Studies suggest that a 5% weight loss is associated with significant histologic improvement.[10] It is important that dietary intervention in children aimed toward weight loss includes consultation and monitoring by a registered dietician and includes regular aerobic exercise progressing in difficulty as fitness allows.[11]
Vitamin E (alpha tocopherol), by virtue of its anti-oxidant properties has been proposed as a potential treatment for NAFLD and has been shown to decrease serum ALT in an open label study in obese children.[12] Similar studies are underway for ascorbic acid in addition to vitamin E. Some studies have suggested improvement in transaminases with ursodiol alone or in combination with Vitamin E although at this time, routine use of ursodiol for pediatric NAFLD does not appear justified.[13] Metformin is the only oral hypoglycaemic agent extensively used in childhood NAFLD. Adult studies suggest it improves NAFLD by inducing weight loss. Preliminary studies suggest that, at a dose of 500 mg twice daily, it is effective in improving transaminasemia and improving radiologic markers of NAFLD.

Obesity is also a recognized risk factor in other hepatobiliary disorders in children and needs to be borne in mind. Overweight, especially female adolescents are more likely to develop gallstones, and concomitant hypertriglyceridemia is a recognized risk factor in pediatric pancreatitis.
In conclusion, the obese child and adolescent is at risk of liver disorders most notably the development of nonalcoholic fatty liver disease. Strategies geared toward prevention including education on exercise and diet seem to hold the greatest promise to improve outcomes as trials are in progress to define the potential scope of pharmacotherapy in this disease.

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Release sustained strength against COPD with 24-hour Onbrez® Breezhaler®

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The only Ultra[1] - LABA — offers patients[2]:

- ✔ Superior improvements in FEV_1 vs other bronchodilators
- ✔ Clinically meaningful improvements in breathlessness
- ✔ Improvements in quality of life
- ✔ A good overall safety and tolerability profile

Onbrez Breezhaler (indacaterol) inhalation powder, hard capsules
PRESENTATION: Onbrez Breezhaler 150mcg and 300mcg inhalation powder hard capsules containing indacaterol maleate, and separate Onbrez Breezhaler inhaler. **INDICATIONS:** For maintenance bronchodilator treatment of airflow obstruction in adult patients with chronic obstructive pulmonary disease (COPD). **DOSAGE AND ADMINISTRATION:** Recommended dose is the inhalation of the content of one 150mcg capsule once a day, administered at the same time of the day each day, using the Onbrez Breezhaler inhaler. Capsules must not be swallowed. Dose should only be increased on medical advice. The inhalation of the content of one 300mcg capsule once a day has been shown to provide additional clinical benefit with regard to breathlessness, particularly for patients with severe COPD. Maximum dose is 300mcg once daily. No dose adjustment required in elderly patients, for patients with mild and moderate hepatic impairment or for patients with renal impairment. No data available for use in patients with severe hepatic impairment. No relevant use in the paediatric population. **CONTRAINDICATIONS:** Hypersensitivity to the active substance, to lactose or to any of the other excipients. **WARNINGS/PRECAUTIONS:** ***Asthma:*** ♦ONBREZ BREEZHALER SHOULD NOT BE USED IN ASTHMA. ***Paradoxical bronchospasm:*** ♦ If paradoxical bronchospasm occurs Onbrez Breezhaler should be discontinued immediately and alternative therapy substituted. ***Deterioration of disease:*** ♦ Not indicated for treatment of acute episodes of bronchospasm, i.e. as rescue therapy. ***Systemic effects:*** ♦Indacaterol should be used with caution in patients with cardiovascular disorders (coronary artery disease, acute myocardial infarction, cardiac arrhythmias, hypertension), in patients with convulsive disorders or thyrotoxicosis, and in patients who are unusually responsive to beta2-adrenergic agonists. ***Cardiovascular effects:*** ♦ Indacaterol may produce a clinically significant cardiovascular effect in some patients as measured by increases in pulse rate, blood pressure, and/or symptoms, ECG changes. In case such effects occur, treatment may need to be discontinued. ***Hypokalaemia:*** ♦ Beta2-adrenergic agonists may produce significant hypokalaemia in some patients, which has the potential to produce cardiovascular effects. In patients with severe COPD, hypokalaemia may be potentiated by hypoxia and concomitant treatment which may increase the susceptibility to cardiac arrhythmias. ***Hyperglycaemia:*** ♦Inhalation of high doses of beta2-adrenergic agonists may produce increases in plasma glucose. Upon initiation of treatment with Onbrez Breezhaler plasma glucose should be monitored more closely in diabetic patients. ♦During clinical studies, clinically notable changes in blood glucose were generally more frequent by 1-2% on Onbrez Breezhaler at the recommended doses than on placebo. Onbrez Breezhaler has not been investigated in patients with not well controlled diabetes mellitus. ***Pregnancy and Lactation:*** ♦No data available from the use of indacaterol in pregnant women. Onbrez Breezhaler should only be used during pregnancy if the expected benefits outweigh the potential risks. ♦Not known whether indacaterol / metabolites are excreted in human milk. A decision must be made whether to discontinue breast-feeding or discontinue Onbrez Breezhaler therapy, taking into account the benefit of breast-feeding for the child and the benefit of therapy for the woman. **INTERACTIONS:** ♦Concomitant administration of other sympathomimetic agents may potentiate the undesirable effects of Onbrez Breezhaler. Onbrez Breezhaler should not be used in conjunction with other long-acting beta2-adrenergic agonists or medicinal products containing long-acting beta2-adrenergic agonists. ♦Concomitant hypokalaemic treatment with methylxanthine derivatives, steroids, or non-potassium-sparing diuretics may potentiate the possible hypokalaemic effect of beta2-adrenergic agonists, therefore use with caution. ♦Indacaterol should not be given together with beta-adrenergic blockers (including eye drops) as these may weaken or antagonise the effect of beta2-adrenergic agonists. Where required, cardioselective beta-adrenergic blockers should be preferred, although they should be administered with caution. ♦Inhibition of the key contributors of indacaterol clearance, CYP3A4 and P-gp, does not raise any safety concerns given the safety experience of treatment with Onbrez Breezhaler. ♦Indacaterol has not been shown to cause interactions with co-medications. **ADVERSE REACTIONS:** ♦The most common adverse reactions with Onbrez Breezhaler are: nasopharyngitis, upper respiratory tract infection, sinusitis, diabetes mellitus and hyperglycaemia, headache, ischaemic heart disease, cough, pharyngolaryngeal pain, rhinorrhoea, respiratory tract congestion, muscle spasm, peripheral oedema. ♦Uncommon: paraesthesia, atrial fibrillation and non-cardiac chest pain. ♦Please refer to SmPC for a full list of adverse events for Onbrez Breezhaler. **LEGAL CATEGORY:** **POM PACK SIZES:** Onbrez Breezhaler 150mcg - carton containing 10 or 30 capsules and one Onbrez Breezhaler inhaler. Onbrez Breezhaler 300mcg - carton containing 30 capsules and one Onbrez Breezhaler inhaler **MARKETING AUTHORISATION HOLDER:** Novartis Europharm Limited, Wimblehurst Road, Horsham, West Sussex, RH12 5AB, United Kingdom. **MARKETING AUTHORISATION NUMBERS:** EU/1/09/593/001, 002, 007 Please refer to Summary of Product Characteristics (SmPC) before prescribing. Full prescribing information is available on request from Novartis Pharma Services Inc, Representative Office P.O Box 124, Valletta, VLT 1000 Malta. Tel: +356 22983217 2010-MT-01-ONB-16-Jun-2010

References:
1. Cazzola M, Matera MG. Novel long-acting bronchodilators for COPD and asthma. *Br J Pharmacol.* 2008;155:291-299.
2. Novartis Europharm Ltd. Onbrez® Breezhaler® Summary of Product Characteristics

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indacaterol inhalation powder

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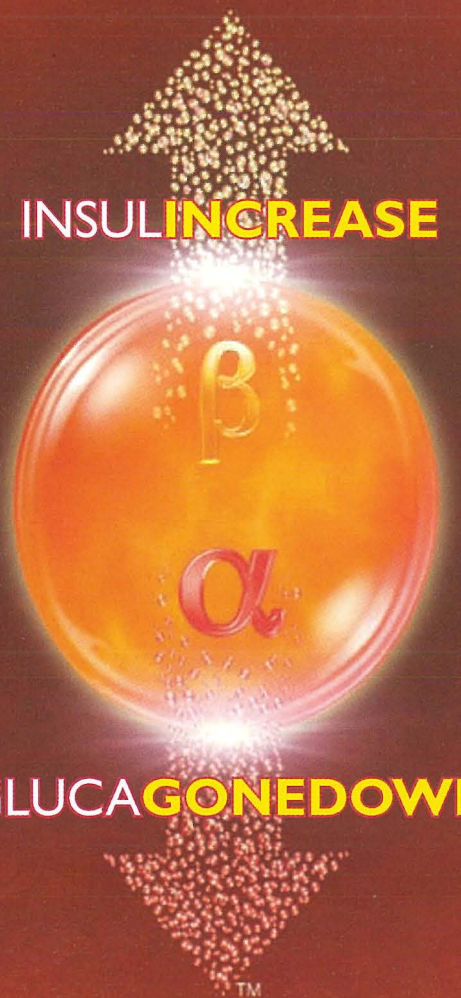
GALVUS and EUCREAS

COMPREHENSIVE POWER TO ADVANCE TYPE 2 DIABETES TREATMENT



GALVUS is a DPP-4 inhibitor that improves glycemic control through powerful islet enhancement[1]

EUCREAS is the combination of a DPP-4 inhibitor, GALVUS, and metformin[2]

Galvus®

Presentations: Galvus 50 mg tablet Each tablet contains 50 mg of vildagliptin and 47.82 mg of the excipient lactose. **Indications:** For the treatment of type 2 diabetes mellitus: As dual oral therapy in combination with - metformin, in patients with insufficient glycaemic control despite maximal tolerated dose of monotherapy with metformin, - a sulphonylurea, in patients with insufficient glycaemic control despite maximal tolerated dose of a sulphonylurea and for whom metformin is inappropriate due to contraindications or intolerance, - a thiazolidinedione, in patients with insufficient glycaemic control and for whom the use of a thiazolidinedione is appropriate. **Dosage and Administration:** In combination with metformin or thiazolidinedione 100mg daily, administered in two divided doses of one 50 mg in the morning and one 50 mg in the evening. In combination with sulphonylurea, 50 mg once daily in the morning. Galvus can be administered with or without a meal. Doses greater than 100 mg are not recommended. Caution should be exercised when treating patients aged 75 years and over. Galvus is not recommended for use in patients less than 18 years old. **Contraindications:** Hypersensitivity to the active substance or to any of the excipients **Precautions/Warnings:** Galvus should not be used in patients with type 1 diabetes or for the treatment of diabetic ketoacidosis. Galvus is not recommended in patients with moderate or severe renal impairment or in haemodialysis patients with end-stage renal disease. Galvus is not recommended in patients with hepatic impairment, including patients with pre-treatment ALT or AST >3x the ULN. Liver function tests should be performed prior to treatment initiation, at three month intervals during the first year and periodically thereafter. Should an increase in AST or ALT of 3xULN or greater persist, withdrawal of Galvus therapy is recommended. Patients who develop jaundice or other signs suggestive of liver dysfunction should discontinue Galvus. Vildagliptin should be used with caution in patients with congestive heart failure of New York Heart Association (NYHA) functional class I-II and is not recommended in patients with NYHA functional class III-IV. Routine monitoring of diabetic patients for skin disorders such as blistering or ulceration is recommended. Patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption should not take this medicine. **Pregnancy and lactation:** Galvus should not be administered during pregnancy or lactation. **Interactions:** Vildagliptin has a low potential for drug interactions. No clinically relevant interactions with other antidiabetics (glyburide, pioglitazone, metformin), amlodipine, digoxin, ramipril, simvastatin, valsartan or warfarin were observed after co-administration with vildagliptin. As with other oral antidiabetic medicines, the hypoglycaemic effect of vildagliptin may be reduced by certain active substances, including thiazides, corticosteroids, thyroid products and sympathomimetics. **Adverse reactions:** Rare cases (>1/10,000 to <1/1,000) angioedema, hepatic dysfunction (including hepatitis). Monotherapy: Common (>1/100, <1/10): dizziness, Uncommon (>1/1,000, <1/100): headache, constipation, arthralgia, hypoglycaemia, oedema peripheral. Very rare (<1/10,000): URTI, nasopharyngitis. Combination with metformin: Common: tremor, headache, dizziness, nausea, hypoglycaemia. Uncommon: fatigue. Combination with sulphonylurea: Common: tremor, headache, dizziness, asthenia, hypoglycaemia. Uncommon: constipation. Very rare: nasopharyngitis. Combination with Thiazolidinedione: Common: weight increase. oedema peripheral, Uncommon: headache, asthenia, hypoglycaemia. **PACK SIZES:** 7, 28 tablets **MARKETING AUTHORISATION NUMBERS:** EU/1/07/414/001, 003. **MARKETING AUTHORISATION HOLDER:** Novartis Europharm Limited, Wimblehurst Road, Horsham, West Sussex, RH12 5AB, United Kingdom. Before prescribing please refer to Summary of Product Characteristics (SmPC). Full prescribing information is available on request from Novartis Pharma, P.O. Box 124, Valletta, VLT 1000, Malta. Tel +356 22983217. 2009-MT-03 GAL SEP 2009

Eucreas®

Presentations: Eucreas 50 mg/ 850 mg film-coated tablet. Eucreas 50 mg/1000 mg film-coated tablet. Each 50 mg/850 mg film-coated tablet contains 50 mg of vildagliptin and 850 mg metformin hydrochloride. Each 50 mg/1000 mg film-coated tablet contains 50 mg of vildagliptin and 1000 mg metformin hydrochloride. **Indications:** Eucreas is indicated in the treatment of type 2 diabetes mellitus patients who are unable to achieve sufficient glycaemic control at their maximally tolerated dose of oral metformin alone or who are already treated with the combination of vildagliptin and metformin as separate tablets. **Dosage and Administration:** The recommended daily dose should be based on the patient's current regimen of vildagliptin and/or metformin hydrochloride. The usual dose is 50 mg/850 mg or 50 mg/1000 mg twice daily one tablet in the morning and the other in the evening. Eucreas should be taken with or just after food. Doses of vildagliptin greater than 100 mg are not recommended. Patients > 65 taking Eucreas should have their renal function monitored regularly, Eucreas is not recommended in patients >75 years. Eucreas is not recommended for use in patients less than 18 years old. For use in renal or hepatic impairment, see contraindications and precautions below or refer to the SmPC for more information. **Contraindications:** Hypersensitivity to vildagliptin or metformin hydrochloride or to any of the excipients. Diabetic ketoacidosis or diabetic pre-coma. Renal failure or renal dysfunction defined as creatinine clearance < 60 ml/min. Acute conditions with the potential to alter renal function e.g. dehydration, severe infection, shock or intravascular administration of iodinated contrast agents. Acute or chronic disease which may cause tissue hypoxia e.g. cardiac or respiratory failure, recent myocardial infarction, shock. Hepatic impairment. Acute alcohol intoxication, alcoholism, Lactation **Precautions/Warnings:** Eucreas should not be used in patients with type 1 diabetes. Due to the risk of lactic acidosis, renal function could be monitored at least once yearly in patients with normal renal function and at least two to four times/year in patients with serum creatinine at the upper limit of normal and in elderly patients. Eucreas is not recommended in patients with hepatic impairment, including patients with pre-treatment ALT or AST >3x the ULN. LFT's should be performed prior to treatment initiation, at three month intervals during the first year and periodically thereafter. Should an increase in AST or ALT of 3x ULN or greater persist, withdrawal of Eucreas therapy is recommended. Patients who develop jaundice or other signs suggestive of liver dysfunction should discontinue Eucreas. Vildagliptin should be used with caution in patients with congestive heart failure of New York Heart Association (NYHA) functional class I-II and is not recommended in patients with NYHA functional class III-IV. Metformin is contraindicated in patients with heart failure, therefore Eucreas is contraindicated in this population. Routine monitoring of diabetic patients for skin disorders such as blistering or ulceration is recommended. As Eucreas contains metformin, treatment should be discontinued 48 hours before elective surgery with general anaesthesia and not usually resumed earlier than 48 hours afterwards. The IV administration of iodinated contrast agents can lead to renal failure. Therefore due to metformin active ingredient, Eucreas should be discontinued prior to or at the time of the test and not reinstituted until 48 hours afterwards and only after renal function has been re-evaluated and found to be normal. **Pregnancy and lactation:** Eucreas should not be administered during pregnancy or lactation. **Interactions:** Vildagliptin has a low potential for drug interactions. No clinically relevant interactions with other antidiabetics (glyburide, pioglitazone, metformin), amlodipine, digoxin, ramipril, simvastatin, valsartan or warfarin were observed after co-administration with vildagliptin. Interactions with metformin hydrochloride that are not recommended include alcohol, cationic active substances e.g. cimetidine and intravascular administration of iodinated contrast media. Combinations requiring caution include metformin hydrochloride with medicines tending to produce hyperglycaemic activity e.g. glucocorticoids, beta agonists and diuretics. The dose of antihyperglycaemic medicinal products may need to be adjusted in combination with ACE inhibitors. **Adverse reactions:** Rare cases (>1/10,000 to <1/1,000) angioedema, hepatic dysfunction (including hepatitis) have been reported with vildagliptin. Vildagliptin Monotherapy: Common (>1/100, <1/10): dizziness, Uncommon (>1/1,000, <1/100): headache, constipation, arthralgia, hypoglycaemia, oedema peripheral. Very rare (<1/10,000): URTI, nasopharyngitis. Metformin monotherapy: Very common (>1/10) Nausea, vomiting, diarrhoea, abdominal pain and loss of appetite. Common: metallic taste. Combination vildagliptin with metformin: Common: tremor, headache, dizziness, nausea, hypoglycaemia. Uncommon: fatigue. **PACK SIZES:** 30, 60 film-coated tablets **MARKETING AUTHORISATION NUMBER:** EU/1/07/425/002–3, EU/1/07/425/8-9. **MARKETING AUTHORISATION HOLDER:** Novartis Europharm Limited, Wimblehurst Road, Horsham, West Sussex, RH12 5AB, United Kingdom. Consult full Summary of Product Characteristics (SmPC) before prescribing. Full prescribing information is available upon request from: Novartis Pharma, P.O. Box 124, Valletta VLT 1000, Malta. Tel +356 22983217. 2010-MT-01 EUC Mar 2010

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Galvus vildagliptin

Eucreas vildagliptin/metformin

1. Novartis Europharm Ltd. Galvus® Summary of Product Characteristics
2. Novartis Europharm Ltd. Eucreas® Summary of Product Characteristics

COMPETITION CORNER – ISSUE 5/10

Last issues' challenge answers

1. What was the name of the nurse who came up with the idea of the contraceptive pill? **Margaret Sander**
2. Name one disease transmitted by the Asian Tiger Mosquito? **Dengue, Chikungunya fever and West Nile fever** were all correct.

The **winners** are:
Anthony Charles (One-day membership at Athenaeum Spa)
Carmen Joslin (One-day membership at Athenaeum Spa)

TheSynapse team would like to congratulate the winners and thank the sponsors of these competitions.

THIS MONTH'S CHALLENGE

The answers to all questions can be found in issue 4/10.Those who get a correct answer will participate in a draw where the first two drawn names will each win a 1 day membership to the Corinthia Athenaeum Spa, Attard.

1. According to the WHO, a particular disease has been eradicated completely lately. This is only the 2nd time that such a feat has been accomplished (after the eradication of smallpox 30 years ago). Name the disease:

_____

Which society has issued Clinical Practice Guidelines during the past few months?

_____

Fill in your details

Name

Address

Email

Mobile

Kindly submit the answers by mail by filling the form on this page addressed to The Professional Services Centre, 3 Guzi Cutajar Street, Dingli, DGL 1201 or submit your answers on- line on www.thesynapse.net/quiz. All submissions will participate in a draw.
You have up to the 15th January 2011 to submit your answers.

Health Promotion Quiz

When was the World Heart Day? _____

The answer can be found in Issue 5/10. The first drawn name will get a 3 month membership for a Parent and Kid at Spinach Fitness Club, Malta's first kids' gym – Melita Training Grounds, Pembroke. The gym may be contacted at www.spinachfitness.com or 21/79383740.

Kindly submit the answers by mail by filling the form on this page addressed to The Professional Services Centre, 3 Guzi Cutajar Street, Dingli, DGL 1201 or submit your answers on-line on www.thesynapse.net/hpdquiz. All submissions will participate in a draw.
You have up to the 15th Janurary 2011 to submit your answers

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Examination Lamp wanted for gynaecologist. Kindly phone 79060903.

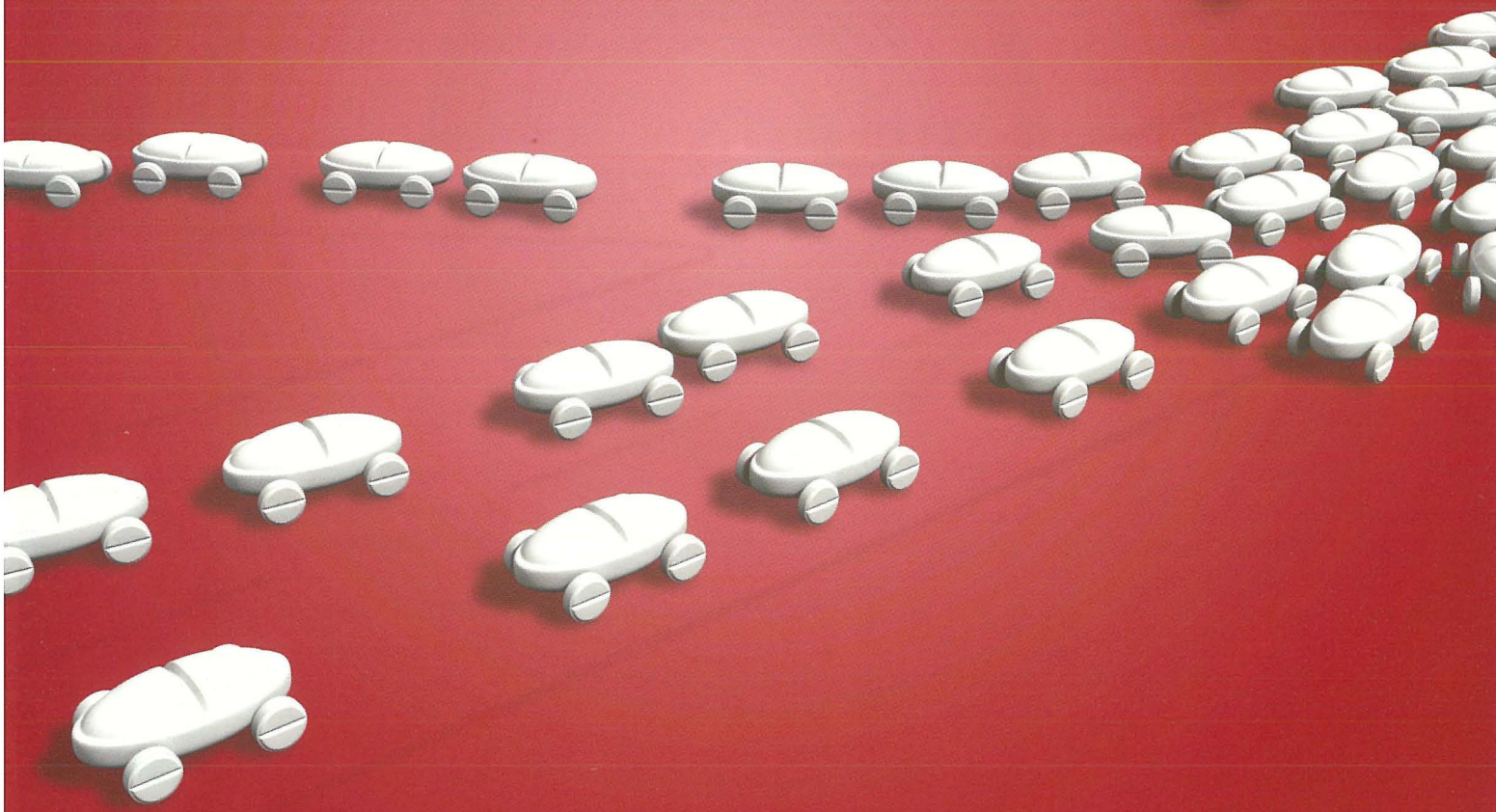
PPI usage survey

Proton Pump Inhibitors Usage Survey for doctors
Simply follow the link http://ppi.pullicino.org to fill in the questionnaire.

Online Survey on Need for Occupational Health Certificate Course (University of Malta) by Distance Learning.

A survey is being carried out online through Synapse, by the Occupational Health and Safety Authority in conjunction with the University of Malta, Department of Public Health to assess the need for an Occupational Health Postgraduate Certificate Course. The aim of this course is to equip medical practitioners, in particular company doctors, with a basic level of knowledge and competence in the field of occupational medicine. This course is aimed at registered medical practitioners and is intended to be offered as a part-time distance learning course with a mixed blend of online learning, self-directed learning and block lecture days.
http://www.thesynapse.net/articles/viewarticle.asp?artid=12795

Avoid clogs



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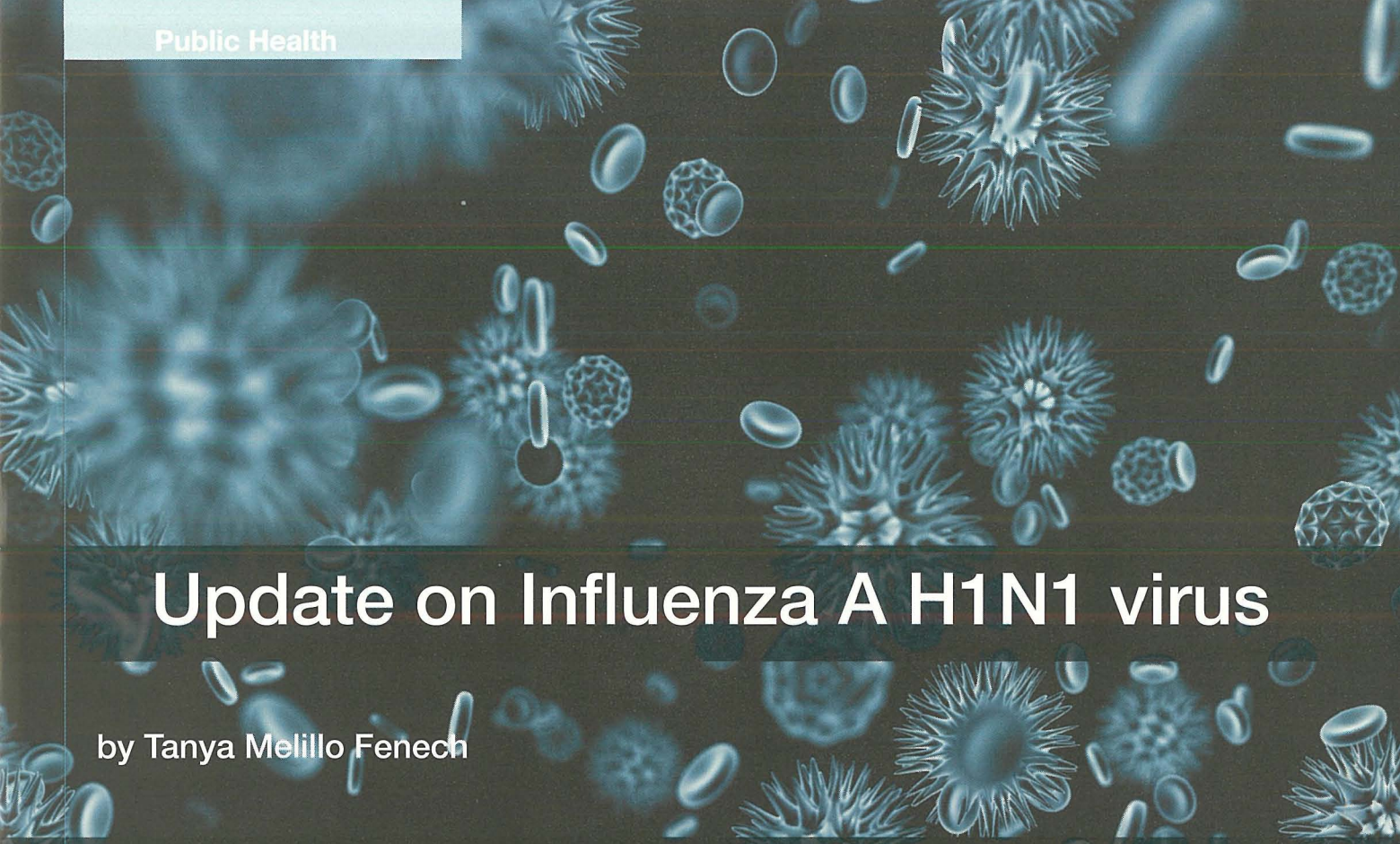


Update on Influenza A H1N1 virus

by Tanya Melillo Fenech

Discovery of a virus variant during the 2009-2010 H1N1 influenza pandemic.

Though the 2009 H1N1 influenza pandemic caused thousands of deaths worldwide, the majority of cases were relatively mild.

However studies done by the Imperial College of London, the University of Marburg, the Italian national influenza centre and the Norwegian national influenza centre have resulted in the discovery of a variant of the virus during the 2009-2010 pandemic that carried a mutation termed D222G in a protein (basically there was a substitution of an amino acid at position 222 of the Haemagglutinin molecule with aspartic acid being replaced by glycine) on the surface of the virus, and people infected with this variant were more likely to have severe and fatal illness.

According to the WHO, the overall prevalence of the D222G mutation is recorded as less than 1.8% of total cases of pandemic influenza A(H1N1) cases, compared with 7.1% of the fatal cases.

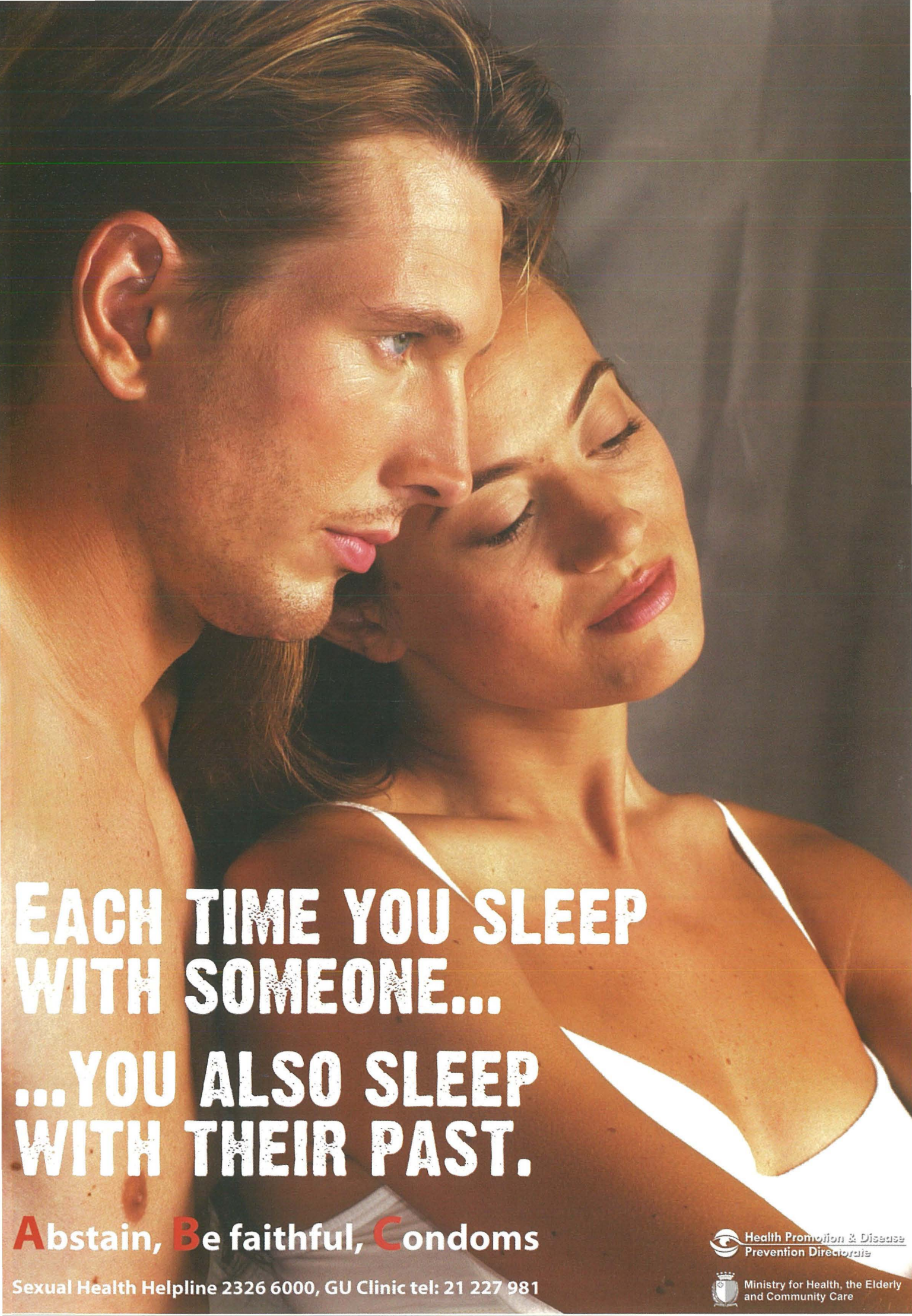
Evidence is showing that the mutant virus could have impaired the lungs' ability to clear out germs since it has an increasing capacity to infect ciliated cells resulting in the cilia stopping from moving. Thus the impaired clearance function allowed bacteria and viruses to reach the lungs more easily potentially being able to cause pneumonia, making this mutant virus more virulent.

New swine flu strain emerges this winter

The pandemic H1N1 influenza virus is currently the predominant influenza virus circulating the southern hemisphere this winter.

Since its emergence in March 2009, the pandemic influenza H1N1 has remained closely related to the first virus detected in California in April 2009 called A/California/7/2001, with little changes in the viruses' genetic makeup with respect to the glycoprotein haemagglutinin (HA) and neuraminidase (NA) which are present on the surface.

Though some genetic variation was reported – the D222G HA mutation; no clear variant has predominated in any country or region. However a recent report in Eurosurveillance this October is showing that a variant has been detected in this winter seasonal influenza for H1N1, first in Singapore which has then spread to Australia and New Zealand. This new influenza A(H1N1) strain discovered during the current influenza season in the southern hemisphere is called A/Singapore/CC01/2010.
Presently it does not represent a significant antigenic change of the virus but it needs to be monitored further as it may be the start of a more antigenic drift of the pandemic influenza A (H1N1) since several genetic distinct changes have occurred and Winter is now starting in the Northern hemisphere. More studies need to be done to see if this strain is likely to cause more deaths and whether the current vaccine can protect against it completely.


EACH TIME YOU SLEEP WITH SOMEONE...
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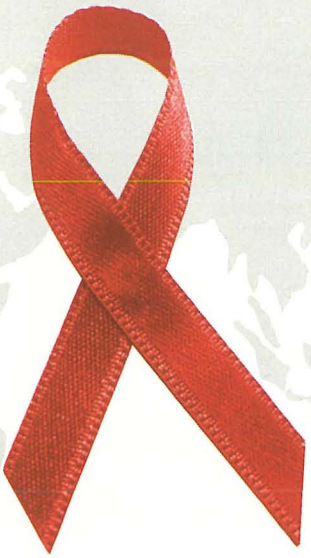
Health Promotion & Disease Prevention Directorate
Ministry for Health, the Elderly and Community Care

What's on for Health Promotion and Disease Prevention in December?

By Charmaine Gauci

World AIDS Day - 1ST DECEMBER 2010

Estimates in 2008 have shown that there are about 33.4 million people living with HIV/AIDS globally. New cases are being diagnosed all the time with 2.7 million being newly diagnosed in 2008. More than 25 million people have died of AIDS since 1981.
Malta has been classified as a low endemic country and has been ranked as the 159th place in respect of rate of people living with HIV. In 2009 there were 20 new cases of HIV, 2 of which were AIDS.



HIV can be transmitted in three main ways:
- Sexual transmission
- Transmission through blood
- Mother-to-child transmission

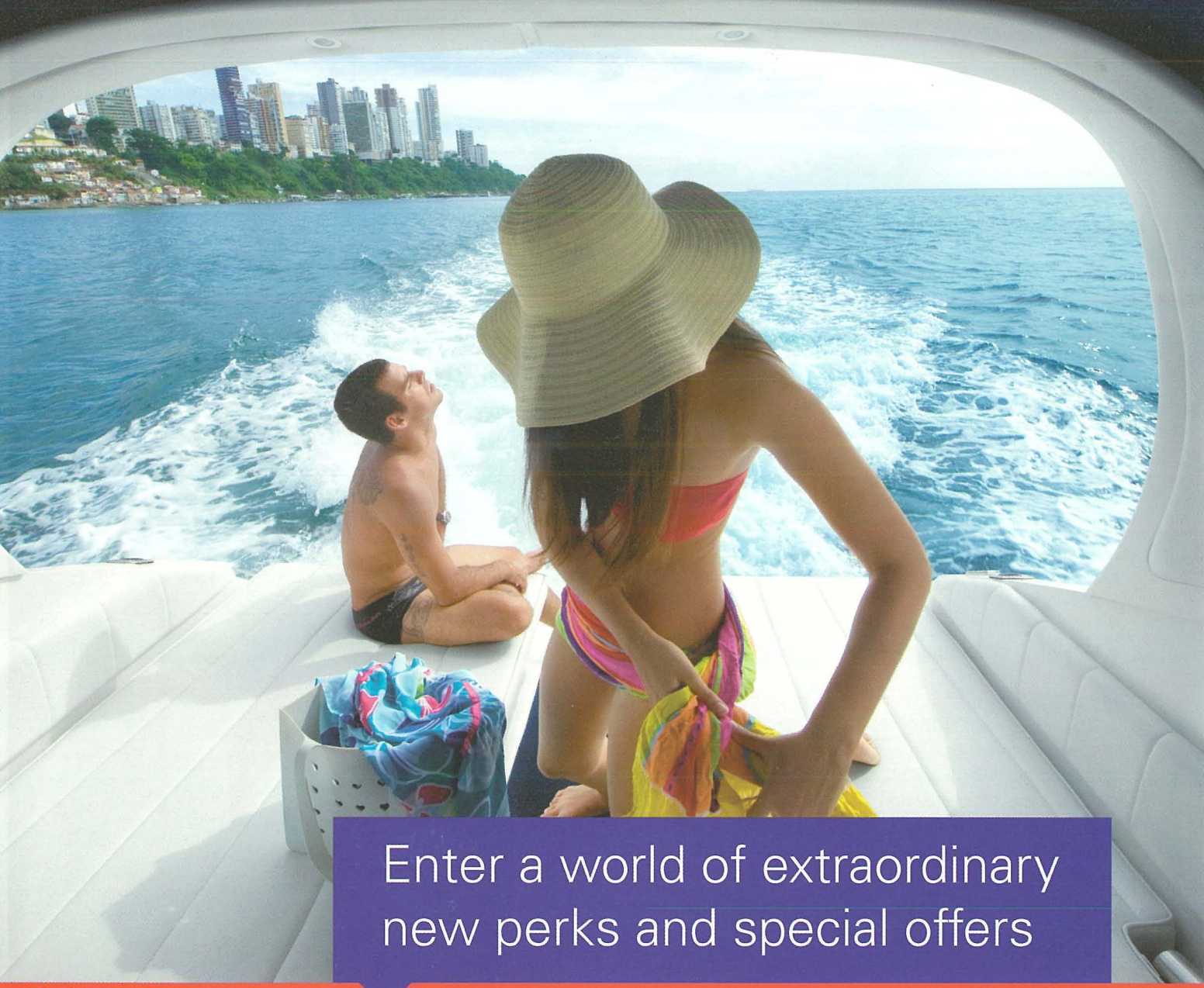
For each route of transmission there are things that an individual can do to reduce or eliminate risk. There are also interventions that have been proven to work at the community, local and national level. Anyone can become infected with HIV, and so promoting widespread awareness of HIV through basic health promotion is vital for preventing all forms of HIV transmission. A campaign currently ongoing to increase awareness about HIV and other STIs with emphasis on prevention.

Drink-Drive Campaign

Driving today is not what it used to be. The roads are more crowded with traffic, and everyone seems to be in so much hurry. Any amount of alcohol affects one's ability to drive.

Each person's tolerance to alcohol depends on a range of factors including:
- Weight;
- Gender;
- Age;
- Metabolism;
- Current stress levels;
- Whether they have eaten recently;
- Amount of alcohol.

So the only safe option is not to drink alcohol if you plan to drive, and never offer an alcoholic drink to someone else who is intending to drive. During Christmas time, more people go out to party and alcohol consumption increases, so more emphasis should be made on this issue. A campaign is currently ongoing as a concerted effort of The Health Promotion and Disease Prevention Directorate, the Accident and Emergency department, Mater Dei Hospital, Transport Malta, Police, Civil protection, Sedqa and the Touring Club.



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Healing & Disease Reversal

The Series

by Albert Cilia-Vincenti

This series explores Dean Ornish's 30-year research experience into healing & disease reversal by dietary and lifestyle changes. He is a California University Professor of Medicine in San Francisco. This instalment continues looking into whether it is possible to consume too many 'good' fats.

Olive oil has very good public relations. It is promoted as the healthiest fat and as the basis of a healthy Mediterranean diet. But is this excellent reputation scientifically justified? Olive oil contains 14% saturated ('bad') fat, so when you consume a lot of it, you're loading yourself with a significant amount of saturated fat as well as a lot of calories. One tablespoon of any oil has 14 grams of fat (126 calories), so when you're pouring any oil on your food, you're showering it with a lot of liquid calories. For most people, reducing total fat consumption is a good idea. You only need about 5% of calories from fat (about 10 grams per day) to provide the essential fatty acids. The average American gets almost 40% of calories from fat.

What about studies showing that olive oil lowers blood cholesterol? That only applies when you substitute olive oil for butter or oils (like palm oil) that are higher in saturated fat. In other words, it's not that the olive oil lowers your cholesterol, it just doesn't raise it as much. A study in the Journal of the American College of Cardiology found that olive oil significantly reduces blood flow to various parts of your body, whereas canola oil (Canola oil is the American name, the European name is Rapeseed oil) and salmon do not. Similar results were found in another study in which olive oil impaired blood flow, whereas walnuts (contain omega-3 fatty acids) improved blood flow.

The landmark Lyon Study found that a Mediterranean diet significantly reduced the incidence of heart attacks and premature death. Many attribute these beneficial outcomes to an increased consumption of olive oil (good for the olive oil industry!). However, in this study, it was found that increased consumption of rapeseed oil, not olive oil, accounted for these improvements. Also, people in this study consumed more whole-grain bread, more root vegetables and green vegetables, more fish, less red meat (beef, lamb and pork were replaced by poultry), and more fruit every day. Butter and cream were replaced by margarine made from rapeseed oil. Why? Because rapeseed oil has significant amounts of omega-3 fatty acids, whereas olive oil does not.

The omega-3 fatty acids are the 'good' fats, with extraordinary health benefits. The omega-6 fatty acids are also essential to your diet, but the problem is that many population groups consume too much of them and not enough of the omega-3 fatty acids. While the omega-3 fatty acids reduce inflammation, the omega-6 fatty acids increase it if you consume too much of them. And inflammation increases the risk of coronary heart disease and other chronic diseases.

The ideal ratio of omega-6 to omega-3 fatty acids should be about 1:1, or no more than 2:1 but, unfortunately, the ratio in the average Western type diet is between 10:1 and 30:1. The best way to improve this ratio is to consume more omega-3 fatty acids and fewer omega-6 fatty acids. Much of the excessive omega-6 fatty acids come from the wrong kinds of oils. Although olive oil has a 'good for you' reputation, it has 13 times the amount of harmful omega-6 fatty acids as beneficial omega-3 fatty acids. Corn oil is even worse, with a 46:1 ratio of omega-6s to omega-3s.

Rapeseed oil has a much more balanced ratio of 2:1 omega-6s to omega-3s. Flaxseed oil is rich in omega-3 fatty acids with a ratio of 1:3 omega-6s to omega-3s. So, to improve your ratio, one should consume more rapeseed oil or fish oil, and less olive oil. It doesn't mean you shouldn't have olive oil – it has the best taste of all oils, is healthier than many others, but it's not nearly as healthy as fish oil, rapeseed oil, or flaxseed oil. This nutritional medical science information has important connotations for the Maltese food and the general health scene. Rapeseed oil should be advertised as medically proven to be the healthiest (and considerably cheaper than extra-virgin olive oil). However ironically it is very difficult to find rapeseed oil on the shelves of local supermarkets. The Health Promotion department of our Health Ministry should also be looking into this important food and health connection.

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Uncommon Inflammatory Breast Diseases that Mimic Cancer. Part 1

Inflammatory breast lesions have radiologic features that often mimic those of malignancy. Infective mastitis is the most common condition that may be indistinguishable clinically from carcinomatous mastitis.

This article and the next one will present less common forms of inflammatory breast disease that is even more likely to constitute a diagnostic dilemma and require biopsy. The present article will present immunologic conditions causing inflammatory disease. The next article will discuss three categories of inflammatory disease: those caused by atypical infections, vascular disease and a further group in which the cause is unknown.

The immunological diseases discussed below include Churg-Strauss syndrome, amyloidosis, Wegener's granulomatosis, sacroidosis and diabetic mastopathy. All closely mimic breast cancer in their clinical picture and radiographic findings.

Churg-Strauss syndrome

Churg-Strauss syndrome is a very uncommon condition characterized by asthma, pulmonary disease, eosinophilia, and necrotizing vasculitis. Its cause remains unknown, although the disease has classically been considered an immune/allergic disorder. Churg-Strauss syndrome almost invariably affects asthmatic patients. The histological features are vasculitis, tissue infiltration with eosinophils and extravascular granulomas, however these may not all be present concurrently. In 70% of cases there is lung involvement with transient patchy airspace consolidation ("infiltrates") seen on chest X-rays and CT scans that usually lie peripherally. The heart and gastrointestinal tract are the next most commonly involved organs. Lymphadenopathy may be present. Breast involvement is rare. Mammographic features include diffuse increase in breast density (Fig 1) and skin thickening, both of which are also features of infectious mastitis and inflammatory carcinoma. Percutaneous biopsy (FNA or core biopsy) may confirm the diagnosis by demonstrating vasculitis and eosinophilic infiltration and possibly extravascular granulomas.

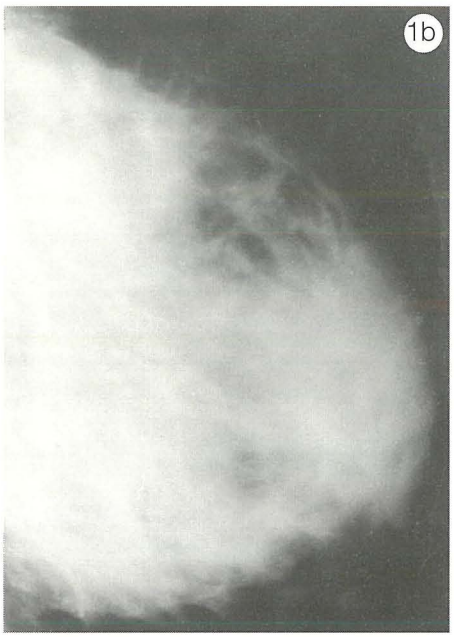
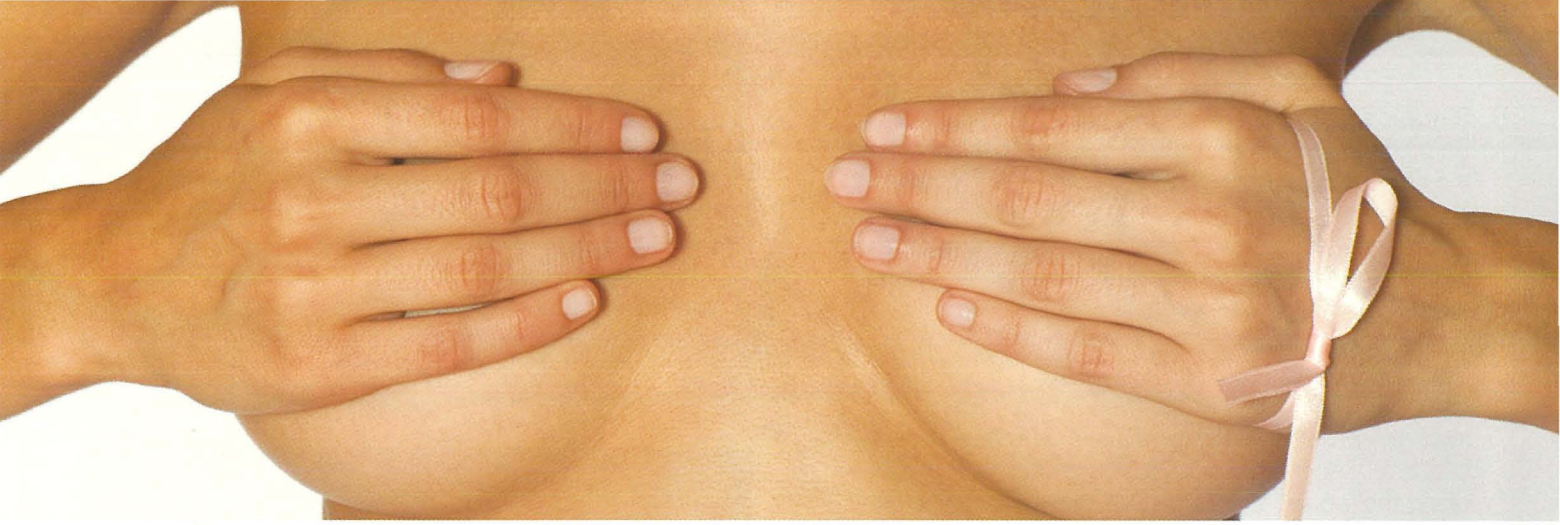


Figure1: Known case of Churg-Strauss syndrome with a history of asthma, fever, purpuric cutaneous disease, tachycardia, lung disease, blood eosinophilia, and transbronchial biopsy confirmation. Initial mammogram (a) showed diffuse increased breast density with skin thickening (arrow) that diminished following treatment with corticosteroids (b).

Amyloidosis

Amyloidosis may be systemic and localized. In addition, it may be classified as primary, secondary, hereditary/familial, endocrine, and senile amyloidosis. Breast amyloidosis is rare and is usually accompanied by diffuse involvement of other organs. Histologically, amyloid deposition is seen (Congo Red stain) around ducts and blood vessels and within lobules that leads to atrophy and obliteration of these glandular components. Calcification and giant-cell reactions may also be present. Since amyloid may also be observed within breast cancer lesions, adequate histological evaluation with good tissue samples (i.e. not FNAs) is required to ensure the diagnosis.



Clinically, breast amyloidosis presents with a single nodule or multiple hard nodules. Mammographic findings include spiculated nodules, often accompanied by irregular or amorphous microcalcifications that may lead to a radiologic diagnosis of carcinoma (Figure2). Amyloidosis in the breast may also present with clustered microcalcifications or diffuse breast infiltration with increased density and skin thickening, all of which are features associated with malignant disease.

Wegener's granulomatosis

Wegener granulomatosis is a necrotizing granulomatous vasculitis that characteristically affects the upper and lower respiratory tracts and kidneys. The skin, joints and muscles, eyes, and peripheral nervous system are also often involved. Breast involvement is rare and is usually accompanied by diffuse systemic disease.

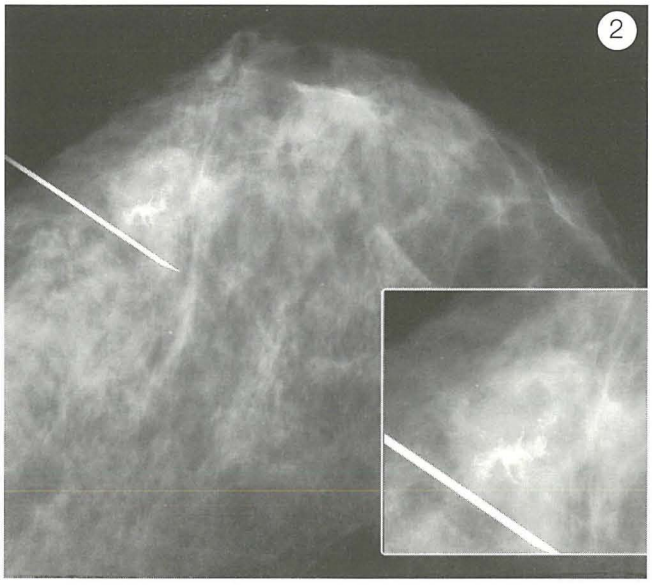


Figure 2: Amyloidosis in the breast. Mammogram shows an ill-defined lobular mass with microcalcifications and large calcifications.

Clinical findings mimic those of breast cancer, but palpable tumors may be tender (unusual for cancer). Mammographically and sonographically, these lesions present with ill-defined masses that are indistinguishable from cancer (Fig 3).

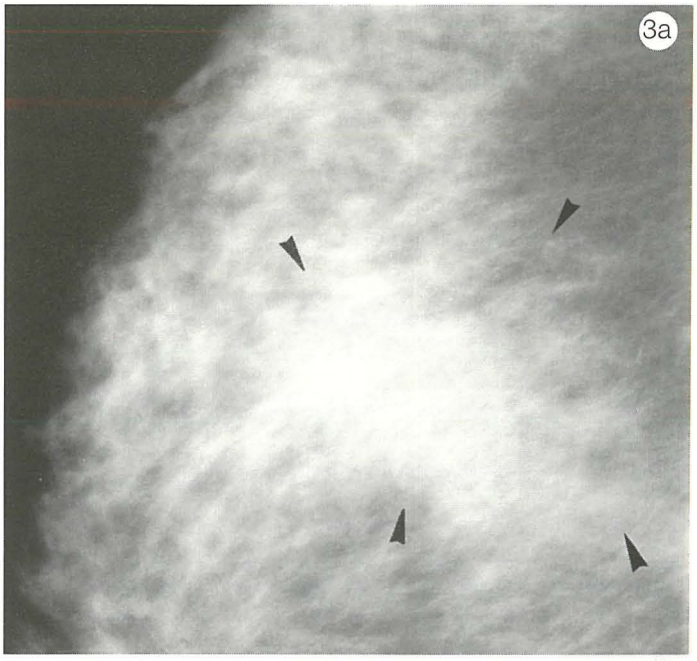
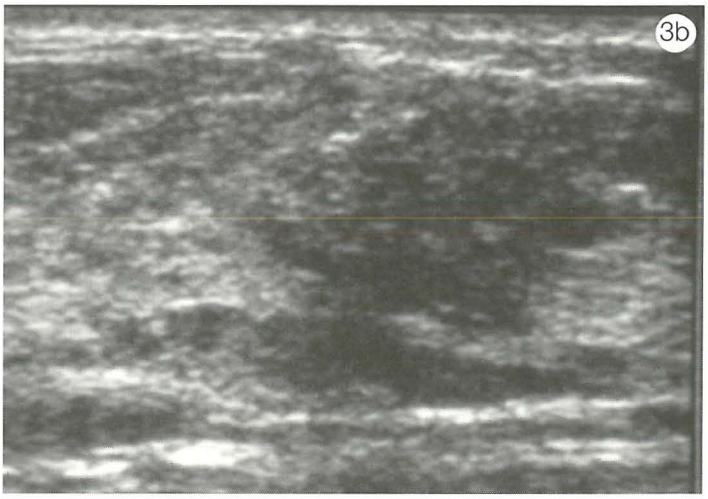


Figure 3: Wegener granulomatosis confirmed on core-needle biopsy. (a) Mammogram shows a suspicious focal asymmetric density (arrowheads). (b) Ultrasound image demonstrates an irregular hypoechoic mass.



Biopsy is required to confirm the diagnosis. Histologically, there is usually a severe inflammatory reaction with numerous eosinophils and a prominent granulomatous component.

Sarcoidosis

Sarcoidosis is an immunologic disease that may affect the lungs, lymph nodes, skin, spleen, and liver. Breast involvement is very rare. It is seen as with other organ involvement, more commonly in women around the 3rd to 4th decade of life. Clinically, it presents with a hard mass that mimics cancer.

Sarcoidosis in the breast may present with intrinsic parenchymal involvement or with lymph node involvement. Histologically, it is characterised by clusters of epitheloid granulomas that from nodules along the lobules and ducts. Langhans' multinucleate giant cells may for Schuamann bodies, but caseous necrosis, calcifications and lipoid necrosis are absent. A non-necrotising granulomatous sarcoid-like inflammatory reaction may be seen within a cancerous lesion and in tuberculosis.

On mammography, sacroidosis presents with an irregular, ill-defined or spiculated mass or even multiple small well-defined rounded masses, the latter is more common with lymph node involvement (Fig 4). Calcifications are absent.

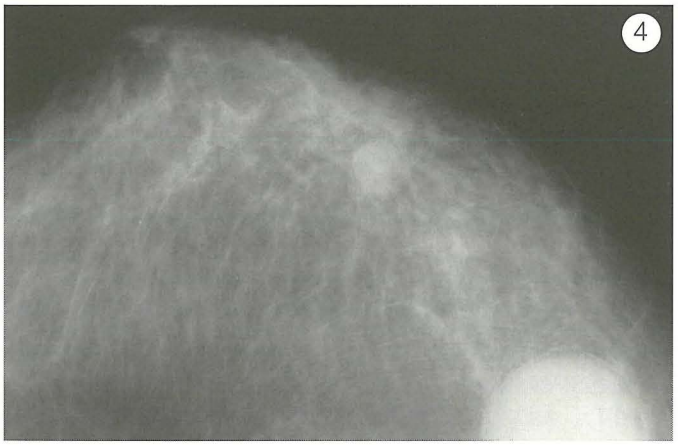
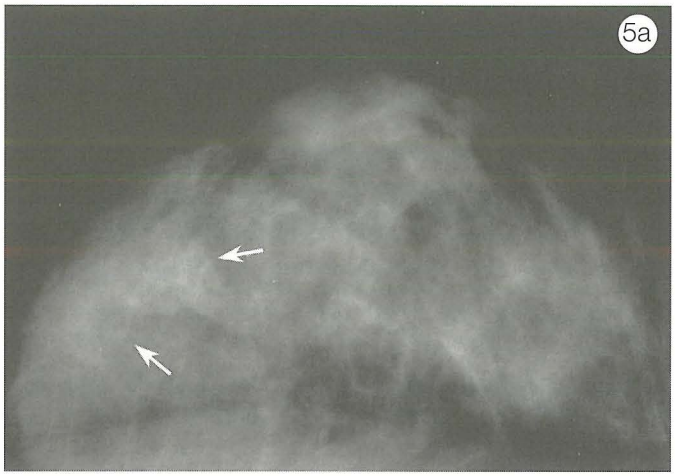


Figure 4: Sarcoidosis presenting with a palpable mass. Systemic disease had been diagnosed 5 years earlier. A round mass with well-circumscribed margins in the outer part of the right breast.

Diabetic Mastopathy

Diabetic mastopathy presents with benign breast masses in women with long-standing insulin-dependent diabetes. Although generally considered a rare disease, it has been found in up to 13% of these patients and has also been reported in men. Diabetic mastopathy is characterized by a perilobar and perivascular lymphocytic infiltrate of mature B cells accompanied by intense keloidal fibrosis of the stroma with lobular atrophy and characteristic myofibroblastic epithelioid cells. Although fairly specific, these findings are also seen in a group of diseases grouped under the term lymphocytic mastopathy that has been seen in other immunologic diseases such as Hashimoto thyroiditis, Sjögren syndrome, and lupus erythematosus. Clinically, diabetic mastopathy presents as single or multiple hard painless nodules that may be multicentric and bilateral. On mammography, these appear as ill-defined masses or as asymmetric breast density (Fig 5a). Ultrasound is more specific demonstrating a hypoechoic ill-defined mass with acoustic shadowing (Fig 5b). The latter is considered a very helpful sign and correlates with the extent of fibrosis; in early cases (with less fibrosis), this sign may be absent.

In summary, immunologic conditions may cause significant diagnostic difficulty in the breast, particularly since clinical, radiological and even some histopathological features overlap with those of cancer.



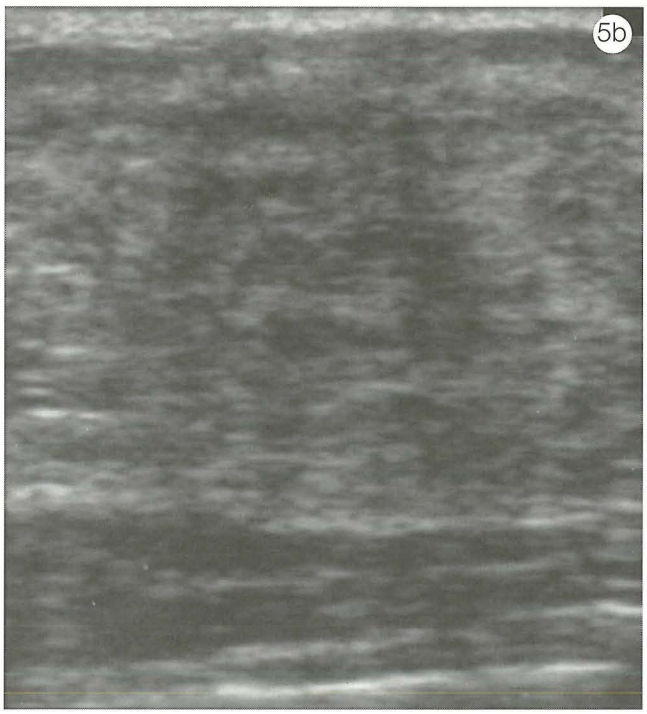


Figure 5: Diabetic mastopathy in a case of long-standing insulin-dependent type 1 diabetes mellitus that presented with a palpable mass. (a) Mammogram shows subtle foci of asymmetric density laterally at the location of the palpable mass (arrows). (b) Ultrasound reveals an irregular hypoechoic mass with ill-defined margins and discrete acoustic shadowing.

The clinical history, radiologic signs and detailed pathological analysis are required to ensure a correct diagnosis. In addition, follow-up of these conditions is crucial to ensure lesion resolution with therapy.

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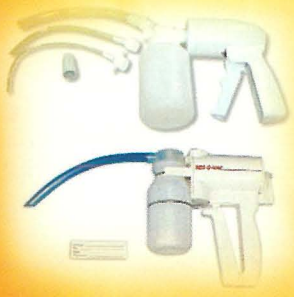

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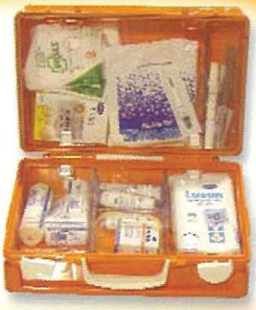

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Fighting Diabetes with Passion

By Marika Azzopardi

Rachel Agius does not give the impression of being a doctor until she starts talking. Then it's all about medicine as this Higher Specialist Trainee in General Medicine, Diabetes and Endocrinology focuses on the main topic that intrigues her most – diabetes with a capital D.

"The problem is not how many diabetics there are in this country but how many remain undiagnosed. This is a recipe for disaster considering the repercussions of living with undetected diabetes. And mind you, diabetes is not only something which happens to the Maltese. It is something which happens to people the world over and it is on the increase." Rachel knows full well all about it, having lived with the presence of diabetes alive and kicking in her immediate family. She speaks about it as if it were an old enemy, one about which she and all the rest of us must remain constantly wary.

Living on the front line, meeting the people suffering from the chronic illness day in, day out, has not made her any less receptive to the problems that these encounter. "The diagnosis and follow-up of diabetic patients can actually be pretty systematic and boring for a doctor. But the excitement lies in picking out those people who are susceptible, helping them come to terms with the illness and going with them through the paces of self-medication and of adopting a new lifestyle. It is amazing that today, even with all our awareness campaigns, people still make no time for health care. I pity the 'intelligent' people who should know better. They remain unaware of the simple fact that once you get diabetes, you are liable to have it hanging over you for life, with the risk of it attacking your eyes, legs, kidneys… the works."

Dr Agius speaks about the different types of diabetes, namely Type 1 and Type 2 (the latter being the more common in Malta), and of the different treatment modalities available. Even so, she is sadly confident that diabetes is here to stay and its incidence will increase in the future. This is not only because of the genetic factors which remain present in Maltese families anyhow, but also because we all generally lead more sedentary lifestyles, eat that much more junk food and

sweet nothings that contribute no good to our general health.

"I chose to study this specific field because my father has diabetes and the illness has always been ever-present in our family. I can say I have grown up experiencing most of the common day to day problems diabetics deal with. I was always aware that diabetes is a silent killer and unless you take care of it, it is easy to succumb to its complications. Somehow this armed me with a determination to try and undermine its persistence in claiming yet more victims."
Rachel was brought up in a family wherein medicine was ever-present. Rachel's father was an ophthalmologist and both herself and her sister followed suit in taking up medicine as their field of study and profession. Their brother is also presently studying medicine and so she was breathing practically breathing medicine from day one.

Dr Agius's daily challenge is to help people discover how they can turn their life and lifestyle around, creating space for a different diet, less stress, more aerobic movement and a strict regime of medication. "It is the easiest part to prescribe pills for a doctor and the easiest thing to pop pills for a patient. But the crux of the matter remains the difficult part responsible patients take on – that of fighting diabetes in a fashion which admittedly is simply embracing the kind of lifestyle ideally each and every one of us should be adopting anyhow."

She speaks of her amazement at how some diabetic patients render themselves helpless up to the point of retaining absolutely no knowledge of what kind or frequency of medication they should be taking. People diagnosed with diabetes erroneously believe their life has ended and that they are now so chronically ill that they are invalids. "This is so far from the truth. People who are diagnosed with diabetes should be pro-active and recognise that today medicine has made great steps forward and that ultimately their cooperation with their medication will lead them to live practically normal lives."

Speaking about herself and what she does in her free time, Dr Agius speaks of her love of pianoforte playing, which she started studying at age three, which she wanted to drop several times during her childhood days, but which eventually led her to acquire five diplomas and an LRSM. "For some time I used to teach music too, but today I just thank God for some free time that I dedicate to play music. I don't need to fret about music, I just let go and play, letting the music flow through me and around me. I am thankful to my parents for giving me the opportunity to learn such a beautiful instrument and I often find myself turning to the piano to relax and unwind myself especially after a busy night shift. My second favourite pastime? Travel. After I graduated in 2004 I travelled a lot and my best experience of all was working and studying in London at Queens Hospital. I was lucky enough to do both a stint in neurology as well as diabetes. Apart from having the opportunity to deepen my knowledge and broadening my clinical skills in both subjects, I also learnt so much about different beliefs, different cultures. Ultimately even this reflected on new discoveries associated with my speciality in diabetes as I found how different diets and lifestyles associated to cultural traditions create problems for people who have to contend with their illness – ultimately everything and anything can impinge on the way people deal with their diabetes. It is then just up to the individual to wade through and learn to cope."

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Out-of-hours care: two possible solutions

By Francesco Carelli

Published literature including an editorial in British Journal of General Practitioners try to answer the present costly and sometimes chaotic situation prevailing in out-of-hours care. Such literature states that what patients want is good access to reliable, authoritative, and reassuring medical advice, with the potential of addressing their needs in a way which is more appropriate to their circumstances. This is irrespective on the method of communication, ie whether it is advice given on a telephone, through face-to-face consultation or a home-visit.

Evidence-based research shows that patients consider good care simply as rapidly accessed care. The common factor is not the structure of care but the speed of response. In fact out-of-hours care is different from normal practice, where the most important factors for the latter are time for consultation and for listening which are more important than speed. So, as first point, in order to provide an optimal out-of-care service we need trained professionals able to answer to this need in a professional manner. To do this we need to train them. In Italy we created a course to specifically train doctors to cover all out-of hours during the year.

At the same time, the UK's previous Minister of State for Health Services, Mike O'Brien, recently suggested that out-of-hours care "clearly needs further reform" and that "Regulation, in particular, needs much more central drive." In the aforementioned editorial, Campbell and Clay conclude that a new partnership is needed, one which recaptures the ethos, values and skills of evidence-based health care management, accomodating the legitimate aspirations of patients.

In Italy, these doctors trained in continuity of care, work as contract physicians and in continuing medical education, under the central drive of the NHS and are linked with the general practitioners through an established interface including an electronic exchange of records. So, immediately after the out-of-hours care provision, the General Physicians are informed about what happened to their patients. Of course, this concerns only home visits and visits carried out on Saturdays at Local Health Authorities offices.

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1. The ADVANCE Collaborative Group. *N Engl J Med.* 2008;358:2560-2572. **2.** The GUIDE Study. *Eur J Clin Invest.* 2004;34:535-542. **3.** The STENO 2 Group Study. *N Engl J Med.* 2008;358:580-591. **4.** The CONTROL Study. *Diabetologia.* 2009;52:2288-2298. **5.** Khalangot M, Tronko M, Kravchenko V et al. *Diabetes Res Clin Pract.* 2009;20(6):611-615. **6.** Diamicron MR 60 mg. *Product Monograph.* **7.** Drouin P. and the Diamicron MR Study Group. *J Diabetes Complications.* 2000;14:185-191. **8.** Sawada F, Inoguchi T, Tsubouchi H, et al. *Metabolism.* 2008;57(8):1038–1045. **9.** Del Guerra S, D'Aleo V, Lupi R, et al. *Diabetes Metab.* 2009;35(4):293-298. **10.** Katakami N, Yamasaki Y, Hayaishi-Okano R, et al. *Diabetologia.* 2004;47:1906-1913.

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