Old donors give good blood

I’m not enough of a Buffy fan to know if there are vampires who specialise in older people: all I know is that the Count himself seems to have gone exclusively for posh young ladies. And now there is a vogue for using young blood to rejuvenate old people. I must try this soon. However, if all you need is a transfusion to prevent death from exsanguination, old blood will do perfectly well, at least in Scandinavia. Among nearly a million people who received blood in Sweden and Denmark, the age (or sex) of the donor made no difference to overall mortality.


Tranexamic acid for postpartum haemorrhage

Tranexamic acid has been around for 50 years and costs very little. It inhibits the breakdown of fibrin and helps to reduce menorrhagia, and thus saves lives in major trauma. So it’s strange that it has taken until now to do a large randomised trial of tranexamic acid in postpartum haemorrhage, which is the leading cause of maternal death worldwide. It was not an easy trial to carry out, involving 20060 women with postpartum haemorrhage in 193 hospitals in 21 countries. Tranexamic acid reduced death from postpartum haemorrhage by 19% and was more effective given early.

Lancet doi: 10.1016/S0140-6736(17)30638-4

Delayed colonoscopy after positive faecal blood

I once called faecal occult blood screening before colonoscopy “smelly randomisation,” because the figures from the study in question suggested that it had low discriminative value. The evidence has swayed back and forth since then, and the process is still quite widely used as a first stage screening test for bowel cancer. Here is a retrospective study from Kaiser Permanente in California that doesn’t settle the question of how faecal occult blood screening should be used, but does suggest that if the screen is positive, you should have a colonoscopy within a month. I’m amazed that anyone with a positive result in the Kaiser system doesn’t get a colonoscopy within a month. In fact most do, but those who experience a delay beyond 10 months, for whatever reason, tend to have more cancers and more that are advanced.


Adalimumab for uveitis—success and toxicity

Uveitis in children and adolescents who have juvenile idiopathic arthritis is common and serious. Up to a third of children with JIA have eye involvement, and 15% of these could get bilateral disease severe enough to characterise them as permanently blind. Fortunately, the absolute numbers are not great, but for the affected children this is a potentially disastrous condition. Adalimumab is a monoclonal antibody against tumour necrosis factor that is frequently combined with methotrexate in the treatment of juvenile idiopathic arthritis. At the time of the SYCAMORE study, it was clearly considered a matter of clinical equipoise whether the addition of adalimumab to methotrexate would improve outcomes in uveitis associated with juvenile idiopathic arthritis, so this was a placebo controlled trial, publicly funded in the UK. The conclusion states that “Adalimumab therapy controlled inflammation and was associated with a lower rate of treatment failure than placebo among children and adolescents with active JIA associated uveitis who were taking a stable dose of methotrexate. Patients who received adalimumab had a much higher incidence of adverse events and serious adverse events than those who received placebo.” I think this could be something of an overstatement: the absolute rate of all adverse effects in the active group was 10 per year compared with 6.5 in the placebo, and for serious adverse effects, 0.29 versus 0.19.


Rizankizumab v placebo for new Crohn’s

113 years since Crohn’s disease was first described, it is still not understood or effectively treated. I needed to know that, because I was puzzled at the inclusion of a placebo group in a trial of initial treatment in active Crohn’s disease. Was this ethical? Perhaps, since the alternative would be steroids, and they don’t have a lasting effect. The active drug here was a new humanised monoclonal antibody targeting the p19 subunit of interleukin-23, rizankizumab. This trial was funded, designed, analysed, and written up by Boehringer Ingelheim. So here is an antibody in search of a target, and when it has found it, it will bind strongly to many many dollars. However, all that can be said for the moment about this phase 2 trial is that “In this short term study, rizankizumab was more effective than placebo for inducing clinical remission in patients with active Crohn’s disease. Therefore, selective blockade of interleukin-23 via inhibition of p19 might be a viable therapeutic approach in Crohn’s disease.” So watch this space. Or perhaps watch other spaces.

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Neuroblastoma

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Neuroblastoma most commonly arises from the adrenal gland(s), but can form anywhere that sympathetic nervous tissue is present, including paraspinal sympathetic ganglia in the chest and abdomen.1–3

Who gets it and what causes it?
The vast majority of neuroblastomas are diagnosed in children younger than 5 years old, and nearly all patients are diagnosed by the time they are 10 years old. The median age at diagnosis is around 18 months.1 Neuroblastoma accounts for nearly 8% of all childhood malignancies and is the most common solid tumour in children not arising from the brain.

Given the rarity of the disease, strict associations are hard to prove, and no specific environmental exposure has been implicated in the development of neuroblastoma.

Neuroblastoma is classically an embryological malignancy derived from neural crest cells. The neural crest is a group of neuronal cells that migrate from the spinal cord to form many structures, including the sympathetic nervous system, during fetal development.

One per cent of patients diagnosed with neuroblastoma have a family history of neuroblastic tumours.6 7 Several oncogenes are implicated in the development of neuroblastoma (fig opposite).

A few medical conditions, some of which are related to aberrant neural crest development, have been shown to predispose a patient to developing neuroblastoma, including Turner syndrome, Hirschsprung disease, congenital central hypoventilation syndrome, and neurofibromatosis type 1.9–13

Most tumours arise in the abdomen, most commonly in the adrenal gland(s). However, tumours may also present with thoracic or paraaortic primary sites, from the neck to the pelvis.1 Neuroblastoma can metastasise by both lymphatic and hematologic spread, the most common sites being lymph nodes, bone marrow, bone, liver, skin, orbits, and dura.

This cancer is highly heterogeneous, partly because it arises from a tissue type that is undergoing rapid differentiation during fetal development, and the transition from normal to malignant tissue can occur at multiple points in development. Therefore, some tumours are rapidly proliferative but regress over time, and other tumours grow more slowly but are highly malignant.8

Most neuroblastoma tumours retain the ability to metabolise catecholamines (such as adrenaline (epinephrine), noradrenaline (norepinephrine), and dopamine), which can lead to hypertension or other symptoms associated with excess catecholamines (such as dizziness, nausea, headache). Importantly, the metabolites homovanillic acid and vanillylmandelic acid are secreted by most tumours, and these can be detected in the urine of patients.15–17

WHAT YOU NEED TO KNOW

• Neuroblastoma is the most common extracranial solid tumour in children; most patients are diagnosed by 5 years of age
• Diagnosis can usually be confirmed by urine catecholamines and imaging; however, biopsy of the primary site (or bone marrow for staging purposes) is required to establish biology and risk stratification
• Treatment varies from observation alone for certain low risk patients to intense multimodal therapy for high risk patients
• Prognosis is excellent for patients with low risk disease and poor for those with high risk disease
• Relapsed or refractory (high risk) disease is difficult to cure and is associated with extremely low survival

Neuroblastoma staging systems

International Neuroblastoma Staging System (INSS)3

• Stage 1: Localised tumour with complete gross excision, with or without microscopic residual disease
• Stage 2a: Localised tumour with incomplete gross excision
• Stage 2b: Localised tumour with or without complete gross excision
• Stage 3: Unresectable unilateral tumour infiltrating across the midline (beyond the opposite side of the vertebral column) with or without regional lymph node involvement, or localised unilateral tumour with contralateral regional lymph node involvement, or midline tumour with bilateral extension via infiltration (unresectable) or lymph node involvement
• Stage 4: Any primary tumour with dissemination to distant lymph nodes, bone, bone marrow, liver, skin, and/or other organs (except as defined for stage 4S disease)
• Stage 4S: Localised primary tumour with dissemination limited to skin, liver, and/or bone marrow (limited to infants <1 year of age, marrow involvement <10% of total nucleated cells, 131I-metaiodobenzylguanidine scan findings negative in the marrow).

International Neuroblastoma Risk Group Staging System (INRGSS)5

• L1: Localised tumour not involving vital structures, as defined by the list of image-defined risk factors (IDRFs), and confined to one body compartment
• L2: Local-regional tumour with presence of one or more IDRFs
• M: Distant metastatic disease (except stage MS tumour)
• MS: Metastatic disease in children <18 months old with metastases confined to the skin, liver, and/or bone marrow
How is neuroblastoma diagnosed?

Initial investigations for all patients with suspected neuroblastoma include full blood count, serum electrolytes, renal function, liver function tests, and serum markers for increased cell turnover such as lactate dehydrogenase.

Because neuroblastoma arises from the sympathetic nervous system, specific tests for the presence of catecholamine metabolism are an important part of the initial work-up. The test for catecholamine degradation products homovanillic acid and vanillylmandelic acid (secreted by most tumours and detected in patients’ urine) is highly sensitive and specific for neuroblastoma. As well as being diagnostic, homovanillic acid and vanillylmandelic acid levels are also useful for surveillance during treatment and as part of end-disease surveillance.

Since the most common presentation is an abdominal mass, an ultrasound scan of the abdomen should form part of the work-up in all patients with suspected neuroblastoma. If a mass is detected, further imaging should include computed tomography (CT) or magnetic resonance imaging (MRI) of the abdomen, which may reveal a heterogeneous mass (possibly with calcifications). If there is intraspinal extension of the tumour, MRI is preferred over CT.

After initial imaging, international consensus guidelines recommend a biopsy to confirm the diagnosis. The tissue sample may be obtained by incisional biopsy of the primary tumour, or bone marrow aspiration and biopsy if bone marrow metastasis is suspected. Definitive diagnosis requires one of the following conditions:

- Unequivocal histological diagnosis from tumour tissue by light microscopy in the setting of increased urine catecholamines
- Evidence of metastases to bone marrow on bone marrow aspiration and biopsy in the setting of increased urine catecholamines.

If metastatic evaluation confirms that the tumour seems to be localised, complete resection may be attempted in addition to the biopsy if the risks associated with the procedure are considered to be low.

Investigations for metastatic disease

A comprehensive evaluation for metastases is recommended in all patients for whom there is a high suspicion for or diagnosis of neuroblastoma.

Assessment for bone marrow involvement is a key component of the work-up. Bilateral bone marrow aspiration and biopsy should be performed in all patients. Different imaging techniques are used to detect metastases, including a radionuclide bone scan, $^{123}$I-metiodobenzylguanidine scintigraphy and positron emission tomography with $^{18}$F-deoxyglucose.

Staging

Neuroblastoma has historically been staged using the International Neuroblastoma Staging System (INSS), primarily a surgical staging system that depends on the aggressiveness of the surgical approach used (box opposite). In order to standardise staging internationally, irrespective of surgery, the International Neuroblastoma Risk Group (INRG) has developed a new staging system based on image-defined risk factors.
How is neuroblastoma managed?

Initial management of neuroblastoma is dependent on the patient’s risk of relapse (see left). Patients are placed into three different risk groups, and these groups are used to predict prognosis.

Management varies from observation in patients with low risk disease, to intense multimodal therapy (that is, surgery, radiotherapy, chemotherapy, autologous bone marrow transplantation, immunotherapy, and isotretinoin) in patients with high risk disease.

Management should be handled by a team of specialists including a paediatric oncologist, cancer surgeon, and radiation oncologist.

Low risk disease

Patients with low risk disease have an excellent prognosis. Event-free survival in these patients is 92%, with an overall survival rate of 96%. Surgery is the mainstay of management for low risk disease, although some patients may require chemotherapy, and some may just be observed without the need for surgery.

Most perinatal tumours are INSS stage 1 or stage 2, arise from the adrenal gland(s), and are of favourable histology. Multiple prospective studies have shown that tumours <5 cm in diameter are likely to regress spontaneously.

Surgery is the initial treatment of choice for patients with localised disease who are able to have more than 50% of their tumour safely removed as determined by image-defined risk factors and potential risks associated with surgery on surrounding structures. Although a portion of these patients will have disease progression after surgery, they can be salvaged with surgery or chemotherapy, or both, and achieve overall survival rates comparable to those of similar patients whose disease did not progress.

Observation, with serial ultrasound scans every three to six weeks, is a reasonable alternative in the following patient groups:

- Patients <6 months old with localised tumours <3.1 cm in diameter detected by screening or incidental ultrasound.
- Clinically stable, asymptomatic patients with stage 4S disease.
- Patients with a localised tumour who have had most of the tumour surgically removed.

Observation should continue at increasing intervals for two years.

Given the excellent prognosis of patients with low risk disease, efforts have been made in trials to decrease or eliminate chemotherapy for this patient population. Chemotherapy may be used, but usually only if the tumour progresses after surgery, if surgery would be more feasible with a smaller tumour size, or if the patient is experiencing severe symptoms from mass effect of the tumour (such as airway compromise, spinal cord compression, or bowel obstruction).

A common chemotherapy regimen is carboplatin, etoposide, cyclophosphamide, and doxorubicin.
Intermediate risk disease

Patients with intermediate risk disease achieve an overall survival rate of more than 80% with a combination of surgery and chemotherapy. Duration of chemotherapy depends on the biological features of the tumour. An attempt at gross total resection is recommended after chemotherapy if possible.

If chemotherapy and surgery are not effective, radiotherapy may be used. Patients with biologically favourable local-regional disease that is unresectable have achieved an event-free survival of greater than 80% after treatment with chemotherapy.

High risk disease

High risk disease can be difficult to cure, and a large proportion of these patients experience disease recurrence. Despite intense multimodal therapy, patients with high risk disease have a poor prognosis with an event-free survival of less than 50%. Prognosis depends on pathological subtypes and additional biological factors that remain to be determined.

Patients with high risk disease are therefore treated aggressively with multimodal therapy including chemotherapy, surgery, autologous bone marrow transplant, radiotherapy, immunotherapy, and maintenance therapy with isotretinoin.

Relapsed or refractory disease

Relapsed or refractory neuroblastoma is extremely difficult to cure, and there is no standard treatment for these patients. The median time to relapse is around 1.5 years from diagnosis. Up to 20% of patients with high risk disease will have primary refractory disease, and nearly 60% of patients who complete therapy will relapse. Overall survival after relapse depends on risk stratification, with INSS stage 1 patients having an overall survival rate approaching 70%, compared with an overall survival rate of 40% in stage 2 patients and 2% in stage 4 patients.

Long term sequelae of treatment

Since patients with intermediate and high risk disease are treated with chemotherapy and radiation in addition to surgery, survivors are at risk of experiencing treatment related adverse effects such as ototoxicity, cardiotoxicity, endocrine complications, osteoporosis, secondary malignancies, and future infertility, which may have long term implications (fig 2).

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BMJ OPINION

What have I achieved in six years of teaching?

As I flew home from teaching about non-communicable disease at the Royal Tropical Institute in Amsterdam for the last time, I wondered what I might have achieved in six or seven years of teaching.

Teaching is, I believe, a branch of the entertainment industry. Nobody learns when bored. I’m also a great believer in the quote that I thought came from William Butler Yeats that “Education is not the filling of a pail, but the lighting of a fire.” But I learn from Quote Investigator that Socrates is said to have said, two millennia earlier, “Education is the kindling of a flame, not the filling of a vessel.” Whoever said or wrote it, I believe it strongly. I’m also keen on “All teach, all learn”: the students know much that I don’t know. I work, too, on the principle that the students already know much of what they need to know, and that it’s my job to help tease it out of them.

This set of principles means that in six hours of teaching I try never to talk for more than 10 minutes at a time. I encourage interaction and laughter.

But what have I achieved? I’ve flown many miles, consumed much carbon, spent hours interacting with students, had great fun, and shared the 150 slides on my Powerpoint some 20 times. But is the world any better? Will the students be more effective? Will suffering be relieved, deaths averted, health created? The nature, duration, and style of my teaching make it hard to know. I haven’t taught a skill that can be retained for life, but could I have lit fires, fires that will burn and transform?

Teaching is a privilege and a pleasure, and I enjoy it. We can all remember teachers who had a big impact on us. Perhaps somebody will remember my teaching.

I think back to a dismal teaching session in Kumasi, Ghana. In the evening we ate dinner outside, and I expressed my dissatisfaction to the dean of the medical school, who sat next to me. “But who knows,” he said, “you may have planted an acorn that will grow into a great oak tree.”
A four week old infant is brought to see you by her mother who is concerned that her baby vomits after feeds several times a day. The baby is otherwise well, formula fed, and is thriving with no other symptoms.

Involuntary passage of a baby’s stomach contents back up the oesophagus is a common, normal physiological event. The infant might or might not regurgitate or vomit shortly after feeding, several times a day. This is known as gastro-oesophageal reflux (GOR), and can be associated with feed refusal, crying, and back arching.

As the lower oesophageal sphincter has not yet matured, milk refluxes through the opening into the oesophagus, causing discomfort for the infant (figure). GOR resolves without investigation or treatment.

Consider gastro-oesophageal reflux disease (GORD) if symptoms of regurgitation interfere with the baby’s quality of life or cause complications, such as poor weight gain, difficulty in sleeping, and recurrent chest infections.

It can be difficult to distinguish between colic—excessive, frequent crying in a well baby—and GOR, GORD, or “fussy eating” because of the overlap of symptoms and the lack of useful investigations. In one Australian cohort study, GOR was reported by parents in almost a quarter of infants. Symptoms commenced in the first month of life in 50% of cases and resolved by six months for 75% of infants.

Pre-existing medical problems—Multiple risk factors can contribute to an increased risk of GORD, including infants who were born premature, have anatomical disorders such as hiatus hernia, neurological impairment, and genetic disorders including Down’s syndrome. Most of these infants will be managed by a paediatric specialist.

**Suggested volume of feeds for infants**
As a rough guide, the volume of feeds required for an infant from 1 week of age until 6 months ranges between 100 and 150 mL/kg/day. Some infants fed on demand can tolerate more than 200 mL/kg/day.

For example, a 4.5 kg baby should take 450-675 mL of feed over 24 hours, or 5-8 ounces every three hours.
Red flag symptoms (modified from the National Institute for Health and Care Excellence guidelines)

Presence of any of these requires referral to a paediatrician

What is the vomiting like?
Infants with GOR will usually stain just their own clothes or nearby objects. Frequent vomiting that is projectile and forceful enough to stain a wall or to land across a room is associated with pyloric stenosis. If symptoms start from the third or fourth week in a typically hungry infant who is failing to gain weight, consider pyloric stenosis.

Is the vomit green or yellow rather than white and watery?
Vomit stained with bile is rare and might suggest intestinal obstruction secondary to malrotation or sepsis related ileus. Infants with these symptoms need to be referred to the surgical team urgently.

Is the vomiting unrelated to feeding?
Consider non-accidental injury in the appropriate clinical and social context. If the baby is irritable and is vomiting at times other than around feeds, look for signs of neglect or abuse, as vomiting could be secondary to raised intracranial pressure after shaking.

Are there other symptoms?
Ask if the baby is constipated or has loose stools, which might indicate an intolerance to cows’ milk protein or lactose. Inquire whether the infant has any blood in the stool, which could be caused by protein induced enterocolitis related to cows’ milk.

Mechanism of gastro-oesophageal reflux

WHAT YOU SHOULD DO

Examination of a child with GOR or GORD is usually normal, and largely guided by the working diagnosis. Check the baby’s temperature, palpate the abdomen, and review head circumference measurements to exclude alternative explanations of vomiting, including sepsis, strangulated hernia, and intracranial pathology.

Weigh the infant naked, and review the child health record to see if there is faltering growth, defined as a fall through two centile spaces on the age appropriate UK-World Health Organization growth chart. The term “failure to thrive” is outdated.

Initial management

Gastro-oesophageal reflux
For most infants (including the baby in this scenario) who are well, gaining weight, and present with intermittent vomiting, the mainstay of treatment is providing detailed and confident reassurance to parents (see box below).

Gastro-oesophageal reflux disease
Suspect GORD in breastfed infants if there is persistent vomiting and inadequate weight gain despite breastfeeding assessment and advice by a trained healthcare professional such as a lactation expert or community midwife. In these infants, consider a two week trial of alginate, such as Gaviscon.

In bottle fed infants, first reduce feed volumes by about 20%, but increase frequency, while maintaining the appropriate total daily amount of milk for the infant. If this does not work after a trial of two weeks, offer a trial of thickened formula. Examples in the UK include carob bean gum thickening agents in Aptamil anti-reflux, rice starch in Enfamil anti-reflux, and corn starch in SMA Staydown. If this fails, consider a trial of alginate.

Ask parents how they are coping. Advise breastfeeding mothers that there are national and local breastfeeding support services available, particularly for first time mothers.

What to say to parents

What is reflux?

- If your baby’s stomach is full or his or her position changes quickly, stomach contents can push up against the lower part of the tube that connects the mouth to the stomach (oesophagus) and can cause overflow known as gastro-oesophageal reflux (GOR).
- GOR rarely causes symptoms or distress and usually goes away as the baby’s digestive tract matures, usually by six months, but can take up to one year.
- It does not require drug treatment, but there are some simple measures that might help to reduce the amount or frequency of vomiting:
  - Babies who spit up often benefit from being kept in an upright position for the first hour or so after feeding.
  - Feeding smaller, more frequent amounts can be helpful as your baby continues to gain weight.
Further management of GORD

Most symptoms of GORD will resolve with the measures described. If not, consider a two week trial of anti-reflux medication, either an H2 antihistamine such as ranitidine, or a proton-pump inhibitor such as omeprazole.1 Reassess the response within two weeks. If there is no response, stop the medication and refer the infant to secondary care (see box below). Evidence regarding the use of drugs to treat GORD remains low grade, mixed, and largely based on expert opinion.8–10

Do not offer patients with suspected GORD prokinetics, such as metoclopramide, domperidone, or erythromycin without seeking specialist advice.9,11

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Find the full version with references at http://dx.doi.org/10.1136/bmj.j1802

Management options in secondary care

Secondary care might include investigation of the infant or child with oesophageal pH monitoring with intraluminal impedance studies to document the presence of pathological reflux, evaluate response to treatment, or exclude other conditions. In severe cases, gastroscopy or surgical fundoplication might be required.

HOW PATIENTS WERE INVOLVED IN THE CREATION OF THIS ARTICLE

There were no patients involved in the creation of this article.

EDUCATION INTO PRACTICE

- Do you offer information about breastfeeding support services that are available for your patients? Are you aware of what resources are available locally?
- Do you advise to cut volume, by about 20%, and increase frequency of feeds?
- Do you routinely review infants with GORD within two weeks after a therapeutic trial of drug treatment?

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BMJ OPINION

“The first rule of diagnosis—eyes first and most, hands next and least”

Today learners access the latest guidelines via the internet and investigate and manage patients accordingly. This begs the question, where do teachers belong in this new world? For me, the answer is in teaching the art of history taking and examination. After all, even though the number of available investigations is plentiful, the ability to take a detailed history and perform a thorough examination is paramount.

After my experiences of being on call and not always having investigations available, I’ve found that decisions must be made based on one’s clinical assessment. In many cases, one can be confident of a diagnosis just on the basis of astute observation.

I have witnessed teaching in several schools at an undergraduate level across the UK, Asia, and the US and note a unifying phenomenon. Learners seem disinterested in observing a patient. If they do observe, it is usually for rashes or scars. Too often, it is simply a motion to go through before moving on. I was similar as a student and jumped straight in to palpating, percussing, or auscultating. But in reality we can gain a wealth of information just from observation. Clubbing, signs of liver disease, an arteriovenous fistula, respiratory distress, cyanosis, altered chest expansion, oedema, an elevated jugular venous pressure, muscle wasting, fasciculations, an altered gait, cranial nerve palsies, lymphadenopathy, a goitre … the list goes on.

Yet medical schools globally seem to focus more on manoeuvres, and students follow suit. Maybe future curricula could be designed to emphasise the importance of looking.

I agree with Sir Lancelot Spratt (played by James Robertson Justice) in the film Doctor in the House: “eyes first and most, hands next and least.”

Neel Sharma, graduate from the University of Manchester, Albert Einstein College of Medicine, Montefiore Medical Center, New York
CASE REVIEW  Gastric perforation in a 16 year old girl

A 16 year old girl presented with sudden onset severe central abdominal and left shoulder pain. She had a history of intermittent generalised abdominal pain associated with early satiety and nausea after eating over the preceding year. On assessment, she was tachycardic at 120 beats/min and had a firm, tender mass in the epigastrium. Blood tests revealed a normocytic anaemia (haemoglobin 84 g/L, normal range 12-16) and a neutrophil count of 15×10^9/L (normal range 1.8-8). A plain chest radiograph showed substantial air under the diaphragm, and computed tomography (CT) imaging identified the presence of a large hypodense, heterogeneous mass that almost completely filled the stomach, with leakage of oral contrast into the intrabdominal space (fig 1). On direct questioning, the patient admitted to a tendency to chew her hair, but claimed she had refrained from this for nearly a year preceding her current presentation.

1. What is the cause of this patient’s presentation?
2. What is the acute management of this condition?
3. How should the psychological aspects of the case be managed?

Submitted by Adam Nunn, Nina Jahn, James Hewes, and Christopher Wong

Patient consent obtained.

Cite this as: BMJ 2017;357:j1859

SPOT DIAGNOSIS  Chronic purulent nasal discharge

A 49 year old woman was referred to a community hospital after experiencing persistent purulent nasal discharge for three years. She had not responded to antibiotics. Subsequently, she was referred to a department of otolaryngology for surgical intervention. She underwent a non-contrast computed tomography (CT) scan of her sinuses (fig 1). Based on the CT scan, what is the diagnosis?

Submitted by Zhenxiao Huang and Jingying Ma

Patient consent obtained.

Cite this as: BMJ 2017;357:j2061

If you would like to write a Case Review for Endgames, please see our author guidelines at http://bit.ly/29HCBCAL and submit online at http://bit.ly/29yyGSx
**Herpetiform skin metastases**

A 46 year old woman who had been diagnosed with breast cancer two years previously noticed an asymptomatic rash on her left anterior chest above the site of her mastectomy (right). The rash had slowly progressed over six months from erythematous papules to a vesicular rash. Biopsy revealed cutaneous metastases from breast adenocarcinoma. Cutaneous metastases are seen more commonly in breast cancer than in any other malignancy in women. They are most common on the ipsilateral chest wall. Diagnosis can be difficult as presentation is varied. Herpetiform distribution of metastases is a relatively rare but striking cutaneous presentation of breast cancer.

Ryan Judge (ryan.judge@nhs.net), Preshita Divekar, Dermatology Department, Royal Cornwall Hospitals, Trelliske, Truro, Cornwall, UK

Patient consent obtained.

Cite this as: BMJ 2017;357:j1845

**Did privatisation speed death in Russia?**

In the five years after the Soviet Union broke up, there are estimated to have been an extra seven million premature deaths, four million in Russia alone. Men of working age made up the largest share of these deaths. A retrospective cohort study (Lancet Public Health doi:10.1016/S2468-2667(17)30072-5) attempts to compare age standardised mortality rates in Russian towns that privatised their health services rapidly with those where the process was more gradual. After adjusting for age, marital status, material deprivation history, smoking, drinking alcohol, and socioeconomic status, men of working age in quickly privatised towns experienced 13% higher mortality than in slowly privatised towns.

**Childhood leukaemia survival**

Improvements in survival from childhood leukaemia are an inspiring demonstration of the progress of scientific medicine over recent decades. But they also show great global inequality. A survey of individual data for 89,828 children from 198 leukaemia registries in 53 countries shows general improvement but continuing large disparities (Lancet Haematol doi:10.1016/S2352-3026(17)30052-2). Five year survival for all lymphoid leukaemias in 2005-09 was 52.4% in Colombia and 91.6% in Germany. Within Europe alone, survival from acute myeloid leukaemia ranged from 33.3% in Bulgaria to 78.2% in German registries.

**Risk of uveitis in psoriasis**

The whole-population database of Taiwan can be used to explore all sorts of disease associations, the latest being psoriasis and uveitis (JAMA Ophthalmol doi:10.1001/jamaopthalmol.2017.0569). A group with severe psoriasis with psoriatic arthritis had the greatest risk of incident uveitis compared with the non-psoriatic controls (adjusted hazard ratio 2.40). The group with severe psoriasis without psoriatic arthritis and the group with mild psoriasis with psoriatic arthritis also had an increased risk of incident uveitis (adjusted hazard ratio 1.42 for both groups). However, an increased risk for incident uveitis with mild psoriasis without psoriatic arthritis was statistically non-significant (adjusted hazard ratio 1.09; 95% confidence interval 1.00 to 1.20).

**Hearts and diats**

Current controversies about diet and cardiovascular disease are reviewed in the Journal of the American College of Cardiology (J Am Coll Cardiol doi:10.1016/j.jacc.2017.03.006), which attempts to present the evidence in one central graphic. But alas, this fat and saturated territory is full of slippery places. Already there is a correction to the effect that “in the column entitled ‘Inconclusive evidence; for harm or benefit,’ Virgin coconut oil should have read Sunflower oil and other liquid vegetable oils.” Crucial.

Cite this as: BMJ 2017;357:j2076

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**Strokes in young Americans**

While rates of cardiovascular disease in general have been falling in the USA, rates of stroke in the young have been rising. Hospitalisation rates for acute ischaemic stroke from 2003 to 2012 increased among men (41.5%) and women (30%) aged 35 to 44 years. This has coincided with a near doubling of the prevalence of three or more of five common stroke risk factors among both men and women aged 18 to 64 years hospitalised for ischaemic stroke (JAMA Neurol doi:10.1001/jamaneurol.2017.0020).

**Shush, don’t say it**

In a trial addressing the question “Does the word ‘quiet’ really make things busier?” orthopaedic senior house officers were told by their registrar, “Have a quiet night. I’ll see you in the morning.” In the control group, the registrar said, “Have a good night. I’ll see you in the morning.” The mean number of night referrals leading to admissions was 3.1 (standard deviation 2.6) in the quiet arm and 1.7 (standard deviation 1.3) in the control arm. The difference in admissions between the groups was statistically significant (P=0.04). This entertaining study was published on or near April 1.

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