High flow oxygen for infant bronchiolitis

Oxygen makes the sky blue and burns things up. Generally speaking, we are best to breathe it diluted with nitrogen. One exception is in severe bronchiolitis in patients up to 12 months. The standard treatment to keep oxygen saturation levels between 92% and 98% is to use a standard nasal cannula delivering 2 L of pure oxygen per minute. If that doesn’t work, babies have traditionally been admitted to intensive care to receive higher doses of oxygen by intubation. However, it’s now possible to deliver a higher flow of oxygen mixed with heated, humidified air through nasal cannulae, providing a degree of positive airway pressure in addition to more oxygen. A large Australia-New Zealand trial shows that, used as first line treatment, this can spare some babies with bronchiolitis and hypoxia from admission to the intensive care unit and intubation.

H pylori eradication and metachronous stomach cancer

Metachronous—what does that mean? The trouble is, like a lot of Greek prepositions, μετα can indicate a whole range of things, and there is no modern word beginning in “meta-” which would not be clearer with a different prefix. A metachronous cancer is one of the same type that is diagnosed more than three months after the first, according to some sources. So: some of the early ones are probably synchronous but hadn’t been detected, while others appearing later are new cancers of the same type. How about using the simpler word “subsequent”? Both occurrences are frequent in stomach cancer, which used to be the commonest cancer in the West but declined swiftly and is now most prevalent in the Far East. The reason for this is one of the unsolved mysteries of epidemiology. Could it be something to do with subtypes of Helicobacter pylori? Evidence that this ubiquitous bug plays a role comes from a trial in South Korea, which randomised 470 patients who had undergone endoscopic resection of early gastric cancer or high grade adenoma to receive either H pylori eradication therapy with antibiotics or placebo. The treated group had lower rates of metachronous—i.e., subsequent—gastric cancer and more improvement from baseline in the grade of gastric corpus atrophy than patients who received placebo.

Honey, I shrunk the P value

I have never really been able to engage with statistics. My problem with maths has always been that I need to understand what the end goal is before I can engage with the process. P values and confidence intervals are easy to understand, if one is a believer in a one-in-20 standard of disproof of the null hypothesis. But I’ve always felt that it’s crazy to apply this across all types of hypothesis tested by a variety of methods. For this reason, the P value has fallen into wide disfavour in the last three years or so. Why was it ever so popular in the first place? And would we be better off to demand a test of proof that is 10 times stronger? In fact, this would make surprisingly little difference, as John Ioannidis explains in this classic essay, which is open access and well worth downloading.

Atraumatic adoption

I began this week’s reviews by proposing the abolition of meta- as a prefix. I include meta-analysis; a clumsy cacophonous word which was adopted because it once seemed new and clever. It isn’t really. It often disguises a pointless exercise in combining evidence about a variety of end points arising from different procedures done in different contexts. Not so this one: the population consists of anyone undergoing lumbar puncture, and the choice is simple and binary. You either have it done with a conventional needle or an atraumatic needle. One hundred and ten trials were done between 1989 and 2017 from 29 countries, including 31 412 participants. These are just the better ones. For about a couple of decades it's been perfectly clear that atraumatic needles produce fewer post lumbar puncture headaches and hospital admissions. So why isn’t everyone using them? A good question for your next evidence based medicine class. Evidence reaches a tipping point and becomes proof (discuss), but that does not equate with adoption (discuss).
How to conduct telephone consultations

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Up to a quarter of patient-physician interactions occur via telephone in settings such as US internal medicine and UK primary care.1 Telephone consultations have the potential to improve access, convenience, and choice and are the most common alternative to face-to-face consultations.2 Comparative studies show that patients are equally satisfied with both forms of consultation.3 5 However, randomised controlled trials and time series studies show that telephone consultations do not necessarily reduce workload for clinicians.1 6

There are times when they may be unsuitable. The lack of visual cues and inability to examine the patient are key disadvantages that necessitate careful consideration as to whether phone consultation is safe and effective.1 7 Phone consultations tend to narrowly focus on presenting symptoms, and patients are often not comprehensively assessed.3 A recent Cochrane review underlines the lack of training in phone consulting competencies, and audits suggest unwarranted variation in physicians’ behaviour on the phone.6 8 Based on best available evidence (sometimes expert opinion), we present an approach to telephone consultations in primary care that is largely applicable to other settings such as outpatient clinics.

PRACTICE POINTER

How to conduct telephone consultations

Phone consultations are used to substitute or supplement face-to-face consultations for a wide range of patient needs. For example, for triage and management of different acute and long term conditions, psychological therapy for depression, counselling for smoking cessation, and with patients who might find it difficult to leave their house, take time off from work, or keep an appointment.10 11 Questions at the start of the consultation, such as asking patients whether they are in a quiet private space and whether they can hear you well will allow you to assess the suitability of consulting the patient over the phone.

Speaking to third parties and confidentiality

It is important to speak directly to the patient (including a child if old enough) whenever possible. Telephone consultations involving friends, family, and relatives are common, for example, for a child or for an elderly relative who may prefer someone advocating for them. Only share information with a third party after discussing this with the patient. Document a consultation with a third party in the patient’s notes. Do not feel obliged to discuss any concerns immediately; arrange a return call if you need more time, such as needing to consult a colleague.7 For talking to a third party without the patient’s presence, you may agree in advance with the patient a simple password (recorded in the medical records) that the patient could share with the third party as a confirmation that the patient has agreed to the person sharing information about them.14

Telephone consultations with or about children may need extra thought. Explore children’s and/or parents’ worries, expectations, and emotions. If speaking directly to a child, ask the parents to put the phone on a speakerphone so that they can listen in to the conversation. If the parent is not reassured, or your assessment of the seriousness of the condition differs from that of the parents’, always err on the side of caution and arrange a timely face-to-face consultation.

Triage and management of acute conditions

These can be and often are performed by trained non-clinical staff or nurses. They usually use protocols that include assessing the urgency and reason for the call and provide information such as the call-back timeframe and reachability.1 15 In a patient with, for example, back pain triage includes questions such as “When did the pain begin, and what were you doing at the time?” and checking for “red flags.” As with face-to-face consultations, it is important to systematically cover relevant domains of history such as medication use.3 Ensure strong “safety-netting” by giving guidance on how to recognise deterioration: describe warning signs and appropriate ensuing actions (such as, “There is a
small chance that this will deteriorate. Call back right away if the pain changes at all, if you develop any new symptoms, such as difficulty passing urine or having a bowel movement or numbness in the ‘saddle area,’ or if you are worried”.

For young children, discriminating questions include asking about appearance such as skin colour, physical activity, hydration status, respiratory status, and neurological cues such as seizures.3,17 Have a low threshold for seeing children face-to-face, especially those under 2 years old.

How should I conduct a telephone consultation?

How should I begin?
Where possible, conduct telephone consultations in a quiet room on a fixed line telephone. Use a high quality headset to free up your hands for taking notes and accessing resources that can support your decision making and follow-up actions.

On reaching the patient, verify the person’s name, date of birth, and location, if relevant. Begin by introducing yourself and where you are calling from. Check whether the person is in a private, quiet space and that it is a convenient time to talk. Whenever possible and required, speak directly to the person who has the problem (this includes children), unless you might be specifically calling people for collateral history.

Tips on how to assess physical problems by telephone consultation1,16

- Begin with red flags, which will differ for different conditions (for example, back pain has red flags for the symptoms of cauda equina compression)
- Review organ systems systematically by guiding the patient through the examination and asking, as appropriate, neutral questions and specific open and/or closed questions (avoid leading questions) to assess possible presence and severity of different symptoms and signs. For example,
  - With a patient with low back pain: “Can you bend forward and, if so, how far? Is this less than usual?”
  - With a parent of a crying child with high fever: “Does the child have neck stiffness? Can she turn and move her head around and touch chin to her chest? Could you gently press on your child’s ear—first left, then right? Does it hurt?”
  - “Could you use your mobile phone’s light to look into the child’s mouth and tell me what you see?” etc
- For visible complaints such as rashes, check:
  - Position: “Where is the rash?”
  - Size: “What is the size approximately in cm?”
  - Shape: “What is the shape, and is it symmetrical?”
  - Colour: “What is the colour?”
  - Surface: “Is it smooth or rough?”
  - Distribution: “How is it distributed over your body? Is it on the inside or outside of your joints?”
  - Presence: “Does the rash go away when you press it?”
  - Sensation: “Does the rash itch?”
- Examples of other patient self examination may include assessment of vision, mobility, muscle strength, changes to appearance, and listening to a patient’s cough
- For long term conditions where telephone consulting is planned, discuss aspects of self examination and how to use devices such as a thermometer, blood pressure monitor, glucose meter, peak flow for self examination at home. Offer a face-to-face consultation to allow these skills to be practised. During a telephone consultation, ask for specific results: “What does it say after pulse rate and before your doctor makes the diagnosis?”
- Review organ systems systematically by guiding the patient through the examination and asking, as appropriate, neutral questions and specific open and/or closed questions (avoid leading questions) to assess possible presence and severity of different symptoms and signs. For example,
  - With a patient with low back pain: “Can you bend forward and, if so, how far? Is this less than usual?”
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What specific communication skills might help?

As with any consultation, be empathetic and supportive with a welcoming attitude, which is demonstrated in both words and the tone of voice. What and how you speak becomes very important in telephone calls.

Since a large percentage of face-to-face communication is non-verbal, and this is largely lost in phone communication, we present some specifics for telephone communication competencies based on our clinical opinion and evidence.

Knowledge of names and location of body parts can differ surprisingly widely (especially in non-native English speakers). Clarify what the patient means by each term first. In the absence of visual cues and the patient being able to precisely point at a body part, for example, common understanding is critical.

Check two-sided comprehension (by asking the patient to summarise the key points back); the lack of visual cues prevents your seeing nodding in agreement, etc. Since supporting written material cannot be provided immediately, consider inviting the patient to make notes. If applicable, direct the patient to a website for supplementary information.

If you need additional help or advice from colleagues or others, advise the patient and report when you will call them back. Provide explicit safety-netting: ask the patient to call back if they have any concerns, if
symptoms develop or deteriorate, or if they do not improve as anticipated. Unlike when a patient steps out of a clinic room, there is limited opportunity for patients to discuss or check things after the telephone consult.

Let the other person disconnect first to ensure that he or she has no further issues to raise.

How can I examine the patient?
Some information from indirect examination can be gleaned by phone. Where relevant, ask the patient to conduct self examination or a parent to examine their child. Consider using laymen’s expressions or the patient’s choice of words, such as tummy or stomach instead of abdomen.

Documentation
Let the patient know that you are making notes as you speak (to explain the sound of typing during the call). Be sure to record signs and cues that may not necessarily be documented in a face-to-face consultation. For example, a consultation with a patient with a cough would include whether the patient was able to talk in full sentences and the frequency of coughing. Include all answers, including negative ones; the patient’s expectations, emotions, and comprehension; anticipated risks; and follow-up plan.

When might additional face-to-face consultation be needed?
Set up a face-to-face consultation or home visit if:
• There are technical difficulties with communication, such as the line cutting out
• There are communication difficulties such as the patient not able to hear or understand due to hearing, linguistic, or cognitive problems
• You or the patient/carer become uncertain whether a telephone consultation is safe, such as if you cannot be sure about the diagnosis
• An in-person examination may be needed.

WHAT YOUR PATIENT IS THINKING
Don't call me brave
Sophie Lyons describes what it’s like to be a frightened child patient, and explains why being called “brave” doesn’t help

I was born with several heart conditions. By the age of 10, I’d had around 18 cardiac procedures: three with my chest opened, others by keyhole, others simply diagnostic. All came with general anaesthetics. Throughout my childhood I was called brave and told there was nothing to be scared of. Doctors, nurses, family members—they all said these words to try and comfort me, especially when I told them I was sad or frightened. But the words didn’t stop me from feeling scared. They just made me feel it was wrong to cry, to have these feelings, or even to talk about them.

I just needed a break
The most terrifying experience was going under anaesthetic. It was such an alien feeling—so different from sleeping—that I linked it to death. Every time I was put to sleep, I thought I’d never wake up again. My distrust of anaesthetists started around age 6. I was crying so

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SOURCES AND SELECTION CRITERIA
We searched PubMed and the Cochrane Library to identify original research studies (primarily randomised controlled trials and systematic reviews) evaluating the role of telephone consultations in medicine. We searched Medline using Mesh terms “Telephone” plus additional search terms for “Consultation,” “Patient outcomes (satisfaction),” and “Cost-effectiveness.” We searched Web of Science using the terms “telephone* AND consult* OR teleconsult*.” The initial search was in January 2017, with an updated search in January 2018.

We checked references of identified articles to find additional literature, and we gathered guidelines and protocols on the subject using UK and Dutch national guidelines available online. We used personal networks to investigate the use of telephone in other countries.
much from the fear of what was about to happen that they allowed me to sit on my mum’s lap in the anaesthetic room. I just needed a break; I needed her to carry me out for a few minutes, make me feel safe, and tell me it was all going to be okay, that I’d wake up again. However, the anaesthetists wafted the gas mask over my mum’s shoulder instead, increasing my anxiety during future procedures.

I felt that nowhere was safe
People who I thought I could trust still insisted on taking my blood. Strangers in radiology and echocardiography gave me stickers and bravery certificates after medical tests. I felt like there were no safe spaces inside the hospital, that nobody understood me. I tried to understand what brave meant. Keeping quiet for the happiness of others? Not crying for too long to help them get on with their jobs?

The power of empathy
Years later, when I worked in a children’s nursery, I often saw children in pain and distress being told they were brave, or that they shouldn’t be sad or cry. It reminded me of my experience, so I tried a different tactic. One day, a child fell, grazed her knee, and was shocked by her unexpected stumble. I told her she’d be okay, and instead of calling her brave, I told her about a friend who likes to scare me by making me jump. It made her laugh, and instead of feeling silly for falling over, she understood grown-ups can feel scared too.

I thought about how differently I might have felt about certain situations if doctors and nurses empathised more instead of calling me a word I didn’t feel

I thought about how differently I might have felt about certain situations if doctors and nurses empathised more instead of calling me a word I didn’t feel. I'd explained what a test was for and why I needed it, and apologised if I could see I was upset.

Two of the best things health practitioners did for me was that one made me a chicken balloon out of a glove for doing well during a blood test (way better than a sticker) and another stuck heart monitoring stickers onto his arms for me to rip off, to balance out my pain after a day of intrusive tests. I appreciated the latter’s willingness to share some of the rough ride with me, when it wasn’t his heart function that was being tested. The thing I most respected with clinicians at one children’s hospital, was their “three strike” policy. If they couldn’t get a vein within three attempts, they wouldn’t try again that day—on the one occasion this happened, they took off their gloves and aprons and told me I could go home. I felt like I finally had a bit of control in the situation.

Having worked with children, I know how frustrating it can get when you’re under pressure and they’re not cooperating. But just take a moment to reflect, and ask yourself: if I were this upset, what would I want someone to say, if they couldn’t make it stop?

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SL blogs about her experiences growing up with congenital heart disease at http://achdandme.blogspot.co.uk/.

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When to refer for palliative radiotherapy

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Palliative radiotherapy offers a quick, inexpensive, and effective way of reducing many of the focal symptoms of advanced, incurable cancer, whether these arise from the primary tumour or from metastatic deposits. It can improve quality of life while being associated with limited treatment burden in terms of both hospital attendances and side effects. 1 The average UK general practice oversees care for around 20 patients with terminal cancer each year with higher numbers seen in secondary care, 2 3 while a Canadian survey of general practitioners found that 85% had provided care for patients with advanced cancer within the previous month. 4 This article aims to update non-specialists on the benefits, practicalities, and side effects of palliative radiotherapy to ensure that patients are considered and referred for these treatments when appropriate.

HOW PATIENTS WERE INVOLVED IN THE CREATION OF THIS ARTICLE

A patient representative (a relative of a previously treated patient) had the opportunity to review and comment on the draft manuscript. She did not feel any changes to the manuscript were needed but did share her experiences of her husband’s radiotherapy treatment.

A PATIENT’S PERSPECTIVE

My late husband received palliative radiotherapy multiple times during his treatment for multiple myeloma. Early in the course of his disease, radiotherapy for back pain and spinal cord compression ensured that he was able to continue the gardening he had always enjoyed. Receiving treatment was never uncomfortable for him, but, as his general condition deteriorated towards the end of his life, he spent more time in hospital and the benefits of radiotherapy became less clear. He had a mask made for one of his treatments, which covered his head and neck: he didn’t find this particularly uncomfortable and he was excited to show it to everyone. He even let his grandchildren play with it once treatment was completed.

WHAT YOU NEED TO KNOW

• Palliative radiotherapy offers effective symptom control for focal disease due to cancer
• Increased analgesia, anti-emetics, and in some cases corticosteroids can help to reduce discomfort and side effects
• Acute side effects of radiotherapy usually resolve within 4–6 weeks of completing treatment
• Symptoms of cancer may deteriorate before improvement
• For patients in the final weeks of life, the side effects and disruption of palliative radiotherapy may outweigh the benefits, and holistic palliative care may be more appropriate
Pain due to bone metastases
Postmortem studies have detected bone metastases in up to 70% of patients with advanced cancer. Such metastases often cause localised pain and account for 35-60% of all palliative radiotherapy treatments. Pain may be constant or intermittent, and can be neuropathic with a radiating dermatomal component and possible altered sensation, and often limits activities of daily living. Initial management combines analgesics and a holistic assessment of needs with interventions as required, such as home adaptations and walking aids. If, despite weak opioids, patients have persistent pain or side effects of medication, consider referral for radiotherapy. Metastases in long bones have a risk of pathological fracture. When this risk is assessed to be high, surgical stabilisation is often carried out before radiotherapy.

Palliative radiotherapy provides pain relief in a median of 2-3 weeks for 60% of patients (table 1 on bmj.com). Where pain recurs, retreatment can be considered after at least four weeks to allow response. Intravenous bisphosphonates offered equivalent pain relief to single fraction radiotherapy for metastatic prostate cancer in a single randomised controlled trial. This may be an alternative option for patients with prostate cancer naïve to bisphosphonates.

Symptoms due to locally advanced thoracic cancer
Lung cancer is the third commonest cancer in the UK and 28% of patients will present with locally advanced disease. Thoracic symptoms include dyspnoea (50%), chest pain (28%), cough (40%), haemoptysis (10%), and dysphagia (7%). Some of these local symptoms can be successfully palliated in about two thirds of patients, although the success rate varies with symptoms.

Palliative radiotherapy to the mediastinum improved obstructive dysphagia from locally advanced oesophageal cancer in around two thirds of patients after a median of four weeks in a non-randomised phase I/II study. Given this delay in improvement and the risk of deterioration due to acute oesophagitis, patients with clinically significant dysphagia at baseline often undergo oesophageal stenting before radiotherapy. Radiotherapy improves durability of swallowing function after stenting. However, for patients with very limited prognosis, stenting alone can provide rapid relief of dysphagia, and this group is unlikely to benefit from the addition of palliative radiotherapy.

Symptomatic radiation pneumonitis (occurring in <5%) can occur from six weeks to six months after treatment that includes the lungs. Refer patients with cough and dyspnoea without another clear cause to the treating oncologist urgently for assessment and consideration of oral corticosteroids.

Pain and neurological compromise due to malignant spinal cord compression
Symptom progression varies, from neurological deterioration over hours to a gradual decline over weeks. Urgent magnetic resonance imaging (MRI) is required to confirm the diagnosis, and oral dexamethasone 16 mg once daily (with proton pump inhibitor) is routinely administered. Subsequent assessments target expected prognosis in order to guide management decisions. The median overall survival after a diagnosis of malignant spinal cord compression is 3-4 months. When predicted prognosis is more than six months, neurosurgical decompression may be considered before radiotherapy on the basis of a single randomised study showing improved neurological outcomes. Unfortunately, most patients have a prognosis of less than six months. For these patients, urgent palliative radiotherapy (within 24 hours of MRI confirmation) aims to reduce pain and retain or improve neurological function. The best neurological outcomes are seen in those retaining some movement before treatment or with gradual onset of neurological symptoms. For patients with established paraplegia, less than 10% regain mobility; in the absence of pain, and if the prognosis is very limited, holistic palliative care and appropriate social or nursing support may be more appropriate.

Acute side effects reflect the vertebral level treated, while late radiation induced spinal cord myelopathy is rarely seen with palliative doses (<1%).

Symptoms due to brain metastases
Brain metastases occur in 20-40% of individuals with systemic cancer. Presentation can be with seizures, focal
Practicalities of palliative radiotherapy

• Anatomically targeted treatment during which the patient lies still on a relatively hard-topped treatment couch for about 15 minutes. The procedure itself is not associated with pain, but some may find the treatment position uncomfortable. Increased pain relief ahead of treatment can help. Occasionally this discomfort outweighs the benefits.
• Patients must be able to provide informed consent. In emergency situations (such as spinal cord compression) a decision may be made in the patient’s best interests if the patient lacks capacity and has no available representative.
• Patients must be able to follow verbal commands from radiographers outside the treatment room; a lack of capacity may make it difficult or even unsafe to deliver treatment. Sedation and anaesthesia are not routinely used for palliative radiotherapy.
• Palliative treatments are usually delivered as a single dose or a short course (usually over 1-3 weeks).
• A close fitting mask may be needed to ensure a consistent treatment position for treatments to the head, neck, or upper chest (fig 2). This is generally well tolerated, even by more anxious patients.
• Re-treatment may be possible for recurrent symptoms, but side effects may be greater.
• Referrals and management of treatment related side effects can be discussed with the local radiotherapy department.

neurology, or symptoms of raised intracranial pressure (nausea, vomiting, and headaches). Prognostic indices help to tailor treatment to the individual patient. For those with limited brain metastases and a life expectancy of more than six months, neurosurgery or stereotactic radiotherapy can be considered.

For those with more extensive cerebral disease who retain a good performance status, whole brain radiotherapy can be offered. Indeed, a recent trial demonstrated no survival or quality of life benefit from whole brain radiotherapy over steroids alone in patients with brain metastases from non-small cell lung cancer.

Symptoms due to advanced head and neck cancer

Patients with locally advanced head and neck cancer often present with a range of difficult to control symptoms including pain, dysphagia or odynophagia, airway compromise, bleeding, and cosmetically distressing tumour bulk. These often frail patients have complex needs.

Prospective studies report improvement in pain control and quality of life in about 50-60% of patients after palliative radiotherapy, with improved ability to eat solids in 33%. Of note, in one UK series, 18% of patients required hospital admission during or immediately after treatment for nutrition, dehydration, and pain control.

Symptoms due to advanced pelvic cancers

Locally advanced pelvic cancers can result in bleeding, discharge, bowel obstruction, urinary disturbance, and pelvic pain. Radiotherapy palliated bleeding in up to 90% of patients with advanced bladder, rectal, or gynaecological cancer and improved other symptoms for half to two thirds of patients. Acute side effects frequently occur, alongside temporary deterioration of existing symptoms. If abdominal discomfort or diarrhoea are severe or fail to resolve with simple measures, seek advice from the treating oncology team.

EDUCATION INTO PRACTICE

• Think about the last time you saw a patient with advanced cancer. How much did you consider localised disease as a possible cause of their symptoms?
• Would you feel confident referring them to discuss palliative radiotherapy to help treat their symptoms?
• What else might you do differently as a result of reading this article?

Bleeding, pain, and malodour due to skin cancers

Symptoms of bleeding, pain, and malodour due to advanced primary skin cancers responded to palliative radiotherapy in 61% of cases in a small observational study. Cutaneous disease—most commonly arising from breast cancer (metastases or primary), melanoma, and lung cancer—can be treated similarly, although the evidence is extremely limited and there are no randomised comparisons with alternative approaches (such as surgical resection, electro-chemotherapy, photodynamic therapy, topical treatments).

What are the most common side effects of palliative radiotherapy?

The side effects of radiotherapy are dictated by which tissues receive a substantial dose. For example, conventional radiotherapy to lumbar spine vertebral metastases will usually involve irradiation of the bowels, resulting in side effects related to both the bone metastasis and bowels (see fig 3). Additionally, treatment is associated with fatigue in at least two thirds of patients, and this can affect quality of life, limiting participation in preferred activities.

Acute side effects of palliative radiotherapy usually resolve within 4-6 weeks of completing treatment. In routine practice, palliative prescribing of analgesia (including strong opiates) and antiemetics underpins the management of side effects. Randomised evidence is limited, and the recommendations for management of side effects (see table 2 on bmj.com) are predominantly based on systematic reviews and guidelines.

Long term side effects are uncommon in palliative radiotherapy, and management of these is led by the treating team with multidisciplinary involvement when required.

What new treatments can we expect?

Stereotactic radiotherapy may provide improved survival and quality of life in patients with metastatic or more advanced disease without increased side effects. Its role is controversial, and randomised studies are under way.

Additional advances are also being made in radionuclide therapies. International trials of novel agents delivering radioactive isotopes to tumour tissue are demonstrating benefits in an increasing range of common conditions such as metastatic prostate cancer.

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A 64 year old woman with a history of Still’s disease presented with more than 10 years of abdominal pain and bloating. Her symptoms were initially intermittent, but over the past six months they had worsened and she had experienced weight loss of 10 kg.

She recalled being told that she had a “leaky gut” by a health professional nine years ago, and that she was advised to follow a gluten-free diet. She believed her symptoms had improved after this, but over time she returned to her original diet and her symptoms eventually returned. Computed tomography scanning and abdominal ultrasound two years ago were normal. A hepatobiliary scan showed a borderline low gallbladder ejection fraction of 34%. She underwent an upper endoscopy to rule out the possibility of a peptic ulcer. No ulcer was found, but several small gastric fundal polyps were observed and biopsied. These were attributed to proton pump inhibitor (pantoprazole) use. Antral biopsies were normal but duodenal biopsies (figs 1 and 2) showed mild villus blunting and intraepithelial lymphocytosis. These were attributed to a disease of autoimmune origin; however, anti-tissue transglutaminase (tTG) testing was negative. A colonoscopy revealed hyperplastic polyps, but was otherwise unremarkable.

1 What is the most likely diagnosis?
2 Is there a definitive diagnostic test for this condition?
3 What is the treatment for this condition?

Submitted by Jessica Richelieu, John WI Morse, and David C Pfeiffer
Patient consent obtained.

Cite this as: Bmj 2018;360:k603

CASE REVIEW
A woman with a 10 year history of abdominal pain

A 64 year old woman with a history of Still’s disease presented with more than 10 years of abdominal pain and bloating. Her symptoms were initially intermittent, but over the past six months they had worsened and she had experienced weight loss of 10 kg.

She recalled being told that she had a “leaky gut” by a health professional nine years ago, and that she was advised to follow a gluten-free diet. She believed her symptoms had improved after this, but over time she returned to her original diet and her symptoms eventually returned. Computed tomography scanning and abdominal ultrasound two years ago were normal. A hepatobiliary scan showed a borderline low gallbladder ejection fraction of 34%. She underwent an upper endoscopy to rule out the possibility of a peptic ulcer. No ulcer was found, but several small gastric fundal polyps were observed and biopsied. These were attributed to proton pump inhibitor (pantoprazole) use. Antral biopsies were normal but duodenal biopsies (figs 1 and 2) showed mild villus blunting and intraepithelial lymphocytosis. These were attributed to a disease of autoimmune origin; however, anti-tissue transglutaminase (tTG) testing was negative. A colonoscopy revealed hyperplastic polyps, but was otherwise unremarkable.

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MINERV A A wry look at the world of research

Sweet’s syndrome
A 59 year old man presented with a painful rash on his face, neck, arms, and legs, associated with fever. The rash followed an upper respiratory tract infection one week before. Examination revealed extensive papules and plaques, which had a mamillated surface and a pseudo-vesicular quality (figure). Treatment with valaciclovir for a presumed varicella infection had been ineffective. Cutaneous biopsy showed prominent oedema in the superficial dermis, with dense infiltrate of neutrophils and lymphocytes in the upper and mid-dermis. Laboratory evaluation revealed a white cell count in the normal range, but with 77% neutrophils, and a raised erythrocyte sedimentation rate. A diagnosis of acute febrile neutrophilic dermatosis (Sweet’s syndrome) was made. Remission was achieved after treatment with glucocorticoids and thalidomide. Sweet’s syndrome is a rare reactive dermatosis, which can be triggered by infection, or associated with medications (such as granulocyte-colony stimulating factor), systemic disease (such as inflammatory bowel disease), or malignancy (particularly haematological).

Susceptibility to Guillain Barré syndrome
A proportion of cases of Guillain Barré syndrome are preceded by an infectious illness—Campylobacter enteritis is a common culprit—but few investigations have addressed the characteristics that make individuals vulnerable. A longitudinal study of more than a million Canadian women found that the incidence of Guillain Barré syndrome was six or seven times higher in those with immune mediated or rheumatological disorders (Int J Epidemiol). A history of blood transfusion or pre-eclampsia was also associated with an increase in risk.

Electroconvulsive therapy and dementia
Although electroconvulsive therapy (ECT) is an effective treatment for severe depression, memory loss is a common side effect. Most deficits resolve within a few weeks of treatment, but questions remain about long term adverse cognitive outcomes. A registry study from Denmark identified nearly 6000 people who received ECT for an affective disorder and followed them up for five years (Lancet Psychiatry). The incidence of dementia turned out to be no higher in this group than in a control group matched for age but not treated with ECT.

Encouraging exercise
Although exercise helps to prevent almost all non-communicable diseases, it’s hard to persuade people to take it. Two trials in primary care from the UK found that a 12 week intervention (involving encouragement, diaries, and wearing a pedometer) increased the amount of time adults spent in moderate to vigorous physical activity and raised their daily step counts (PLoS Med). The improvement was maintained at 12 months and long term follow-up has just shown that participants were still taking more exercise three to four years later. The increase wasn’t large—an extra 400 to 700 steps per day—but perhaps that’s enough to make a difference.

Patterns of child growth
Data from the UK’s four birth cohort studies, which began in 1946, 1958, 1970, and 2001, document how the size and shape of children has changed over the past few decades. In the earlier cohorts, poorer children tended to be shorter and lighter than richer children. However, the difference in height has diminished over time and even the most disadvantaged children in the 2001 cohort were only 1 cm shorter than the least disadvantaged when measured at the age of 7. Socioeconomic differentials in weight have reversed and, in the most recent cohort, it is the poorer children who are heavier (Lancet Public Health).

Syncope and pulmonary embolism
Pulmonary embolism is a serious but uncommon cause of syncope. On the other hand, syncope is a common condition with many other causes. So, what is the probability that someone who reaches hospital after an episode of syncope has had a pulmonary embolism? Very low, according to a huge international database study which found that pulmonary embolism was diagnosed in less than 1% of patients seen in an emergency department for evaluation of syncope (JAMA Intern Med). The conclusion is that these patients rarely need to go through a diagnostic algorithm to exclude pulmonary embolism.