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PRACTICE OBSERVED

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Emergencies in the Home

The acute abdomen

GEORGE D WALKER

A patient with an acute abdomen presents with abdominal pain of less than one week's duration, often accompanied by vomiting and sometimes by shock. The question to be decided by the general practitioner is whether the illness needs urgent admission to hospital or whether it can be managed safely at home. The majority of patients who present to the general practitioner can be managed at home. The patient and his relatives may simply wish to be reassured that the condition is not due to appendicitis. The severity of the abdominal pain or vomiting is a poor guide to the danger of the underlying disease, especially in elderly people and children, and most general practitioners will have alerted their receptionists about the urgency of abdominal symptoms lasting more than two or three hours. When the patient cannot be brought immediately to the surgery, a home visit should be arranged as soon as possible.

In practice, one of the commonest causes of acute abdominal pain is gastroenteritis. Vomiting in the earliest symptom, quickly followed by diarrhoea; the pain diminishes after a few hours. When there is no diarrhoea the doctor should avoid making a diagnosis over the telephone. The doctor should keep an open mind in all cases because appendicitis may be a complication of apparent gastroenteritis—that is, yesterday's gastroenteritis may be tomorrow's acute appendicitis. If the consultation has been delayed until the symptoms have been present for more than four hours, the signs of appendicitis should be apparent. If the history and signs are equivocal a second examination should be carried out four to six hours later. Where a further visit is not possible the patient should be admitted to hospital for observation, though a home visit by a consultant may clarify a difficult case and give the patient and relatives confidence.

Beth, Avon
GEORGE D WALKER, MB, MRCP, general practitioner

Symptoms

The history is at least as important as the examination, and the severity of the pain or the demands of relatives for action should not be allowed to force the doctor into acting too soon. After listening to the story the doctor will wish to define the duration of the pain—when was the patient last quite well? The onset—was it sudden or gradual? The type of pain—is it colicky or not? Has it changed? The site of the pain—has it changed? Exacerbating factors—do movements such as sitting up or breathing change the pain? The doctor should inquire about appetite, vomiting, recent bowel action, micturition, and the last normal menstrual period. The type of contraception, previous episodes of abdominal crisis, previous abdominal operations, and the state of health of other members of the household and colleagues at work should also be ascertained.

If the possible diagnoses are not clear after taking the history they will often be no clearer after examining the patient. This is particularly true of renal colic.

Examination

It is always worth while asking the patient to move upstairs to lie flat on the bed rather than making do with a couch in the sitting room. The diagnostic possibilities suggested by the history may allow the doctor to be selective about the examination. He should note the general condition of the patient, the presence of shock or pallor, jaundice, fever, the state of the tonsils and glands, and the presence of fetor. Furring of the tongue and dehydration must be noted, the ears of children should be examined for otitis media, and the chest sounded for signs of basal pneumonia. Only then, while sitting or kneeling by the side of the naked and recumbent patient should the doctor start examining the abdomen. A sheet will keep the patient warm and maintain modesty, and a chaperone is preferable for girls and women.

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This is confirmed in a man the catheter should be left in place and admission arranged to a urology ward.

Spinal disease may produce abdominal tenderness. Conversely, movement of the legs at the hips can produce pain in patients with appendicitis or, rarely, psoas abscess. In a patient taking anticoagulants a psoas haematoma may be shown by this test and thus clarify a puzzling "acute abdomen" with tenderness in the iliac fossa.

Auscultation will elicit the high-pitched tinkling bowel sounds of intestinal obstruction, or alternatively the silence of an adynamic ileus owing to peritonitis.

No abdominal examination is complete without a rectal examination, which may localise the diseased viscus in an apparently normal abdomen. The state of the peritoneum in peritonitis can be assessed, as well as the presence or absence of scybolic faeces.

Special groups of patients

CHILDREN

In children the commonest problems are gastroenteritis, tonsillitis, and otitis media. A doctor may see a child with apparently slight abdominal pain who has appendicitis as well as otitis media, and it is a good habit to place a hand on the abdomen of all children who complain of discomfort, even when there is obvious otitis media or tonsillitis.

Any child under the age of 2 years who presents with colic accompanied by screaming should be regarded as a possible case of acute intussusception whether or not the classical sausage-shaped mass can be felt during an episode of pain. Pallor is associated with the screaming, and the child is often surprisingly well between the spasms of colic. Constipation is always a possibility, but in my experience the severity of the pain as judged by the reaction of the child, the pallor, and the mother's recall of the exact time of onset should make this difficult diagnosis less difficult.

In the young baby intractable vomiting and loss of weight will suggest pyloric stenosis.

Periodic abdominal pain in children is best diagnosed between episodes if the doctor is to avoid risking his reputation, as one of the attacks may be mimicked by acute appendicitis.

WOMEN

In women dysmenorrhoea is a common and obvious cause of abdominal pain. A pelvic examination with an empty bladder will allow assessment of the bladder, rectum, and the pouch of Douglas, as well as the uterus and adnexae. The possibility of finding an unsuspected ectopic pregnancy should be born in mind. The story of grumbling pain associated with intermittent bleeding, often after a period that was lighter than usual, should alert the doctor to this possibility. Endometriosis and salpingitis can mimic this. Other pelvic masses and seedlings from carcinoma may be detected without difficulty.

The pelvic organs of women who are pregnant may be particularly difficult to assess because physical signs may be diminished, but a tender uterus is usually caused by an obstetric problem and needs an urgent second opinion.

ELDERLY PATIENTS

Care must be taken in assessing very old people who may have other diseases that can hinder communication and can mask the usual responses of the body to infection, inflammation, perforation, and obstruction. Drugs, especially steroids, may diminish the physical signs. Recurrent abdominal pain and acute abdominal pain in patients aged over 50 may need to be followed up and investigated.

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A follow-up study of a series of patients over 50 years of age who presented to an accident and emergency department with an acute abdomen showed that within a year 10% of those discharged with a non-surgical diagnosis were found to have cancer.¹ A case may be made for screening these patients for colorectal cancer, since early diagnosis is associated with improved life expectancy. Suitable screening would include testing the stools for occult blood, performing sigmoidoscopy, and giving a barium enema.

Conclusion

The acute abdomen is one of the most important management problems in general practice because indecision may hazard the patient's life. An unburied and methodical assessment will minimise the risk of leaving a patient with a surgical emergency at home and not swamp the hospital with "unnecessary"

admissions. The young general practitioner should not be dismayed if half his admissions are discharged with non-surgical diagnoses. He has to examine the patient in less than ideal circumstances without the benefit of an immediate second opinion, and social factors as well as pressure from anxious relatives may make hospital admission difficult to resist. It is sensible to err on the side of caution, but experience should eventually allow the home management of most cases of acute abdominal pain presenting in general practice.

I am grateful to Mr D C Britton, FRCS, consultant surgeon, Royal United Hospital, Bath, for his help in preparing this paper.

Reference

¹ Wilson DH. The acute abdomen in the accident and emergency department. *Practitioner* 1980;224:480-5.

A Break from General Practice

General practitioner at sea

R CRUTHERS

In 1978, while looking for an alternative to general practice I saw an advertisement for ships' surgeons by the Royal Fleet Auxiliary (RFA). Never having heard of this company, but with a strong liking for the sea, ships, and travel, I made further inquiries and discovered that this unique merchant fleet is owned and run by the Ministry of Defence to support and replenish Royal Navy ships at sea in whichever part of the world they may be operating.

Replenishment at sea can be with fuel, stores, ammunition, or any combination of the three. Because some of the vessels engaged in these tasks have on board more than 100 personnel they are obliged to carry doctors.

After deciding that leaving a career in general practice in my early 40s was a risk that I was prepared to take for the possible advantages of a "sea change"—I had worked my passage on a cargo-come-passenger ship to New Zealand in 1963—my application was duly processed, including medical fitness. I obtained my basic uniform and reported to my first ship, a tanker of 18 000 tons named RFA Olwen, in Portland Harbour. I entered a new and very exciting world.

My average day at sea consists of short morning and afternoon surgeries, but the main reason d'être is being available to deal with casualty work—from trivial to life-threatening—which inevitably accompanies the procedures undertaken by the ships often in very rough weather. In addition my duties include giving first-aid instruction to sections of the crew, particularly stretcher parties, and looking at the aspects of preventive medicine of the ship's company in their particular tasks on

Royal Fleet Auxiliary
R CRUTHERS, MB, MRCP, ship's surgeon

board. Regular inspection of the food stores and galley is another important duty, as the vessel must carry enough food to enable us to stay at sea for several months at a time if necessary. Royal Fleet Auxiliary ships are based at various dockyards and harbours around Britain, such as Devonport, Portsmouth, and Rosyth and Faslane on the Clyde, and it is usual for the doctor to be asked to join the vessel in one of these ports before the leaves for active duties with Royal Navy ships. This is often preceded by two weeks in Portland "working up" the ship to standard in a variety of manoeuvres with warships from all NATO countries. This "work-up", or basic sea training, includes medical aspects in first-aid and fire fighting (fire being still the seafarer's greatest enemy). Nuclear, biological, and chemical defence techniques are also demonstrated.

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The shape of the abdomen is noted for distension, masses, or visible peristalsis (which is often most easily seen when the patient is most severe). The patient should be asked to point to the site of the pain with one finger and asked if the pain shifts with posture. The effect of deep inspiration and expiration on coughing should be noted. The doctor's warm hand should then be placed gently on the flat of the abdomen, starting in a quadrant away from the site of pain and each quadrant should be palpated in turn, though a home visit by a consultant may clarify a difficult case and give the patient and relatives confidence.

Generalised rigidity often indicates visceral perforation; even when this is from a peptic ulcer there may be no history of abdominal symptoms and the patient may be well enough even to walk into the surgery. In a cold room with a shivering patient it may be difficult to decide between true guarding and areflexia. Patients with a perforated viscus may vomit only once or twice at this stage, while patients with small bowel obstruction who usually have considerable pain vomit repeatedly in the absence of guarding and rebound.

DIFFERENTIAL DIAGNOSIS

Patients with pancreatitis may present with vomiting and few abdominal signs, but low dorsal backache is a helpful clue. Acute pancreatitis carries a high mortality and all cases should be admitted to hospital. When the patient is in shock the doctor will not find this decision difficult even when uncertain about the exact diagnosis. The ease with which acute pancreatitis is confused with myocardial infarction favours admission to a medical ward.

Abdominal palpation may have localised the physical signs and thus reduced the differential diagnosis. Tenderness that is limited to the epigastrium favours dyspepsia or gall bladder disease, but tenderness under the xiphisternum may be due to oesophagitis. An exacerbation of the irritable bowel syndrome may cause upper abdominal pain but the pain is usually in the lower abdomen, and the transverse colon and descending colon are generally palpable and tender.

Tenderness that is central or in the right-lower quadrant favours a diagnosis of appendicitis. This is normally a short history, anorexia, and rebound in the right iliac fossa. Pressure on the transverse or descending colon that causes pain in the right iliac fossa may indicate possible appendicitis, whereas a caecal gurgle on deep palpation of the right iliac fossa often means appendicitis is unlikely. The doubtful case, however, needs careful reassessment a few hours later.

The differential diagnosis between appendicitis and muscular pain may be confusing, but, despite apparent tenderness, guarding, and "rebound," the patient with muscular pain can eat and is otherwise well. It is helpful to examine this patient while he lifts his head and feet a little way off the couch. In muscular pain the tenderness remains or becomes worse, whereas in peritonitis the tenderness is often reduced or absent in this position. The movement of sitting up, however, exacerbates the pain in many patients with acute appendicitis. This is not seen in small bowel obstruction and occurs in only a few patients with cholecystitis.

A mass in the right-upper quadrant favours cholecystitis or empyema of the gall bladder. Gall stones may be found in 20 year olds, but complications are more common in those 60 and over. A positive Murphy's sign (positive in half of patients with cholecystitis) may confirm the diagnosis, but the tender capsule of a liver distended by congestive heart failure or secondary carcinoma may cause confusion and trap the unwary.

A mass in the left iliac fossa may be due to a diverticular abscess, but any abdominal mass in a patient aged over 50 must favour a diagnosis of cancer. If the mass arises from the pelvis it is rewarding to pass a catheter to exclude retention of urine. If

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How to decide

I think that the best way to summarise my time at sea and help other doctors to decide whether or not they wish to try it is to list the requisites and advantages. First and foremost is a liking for the sea and ships. Secondly, in the confidence to make important decisions with seriously ill patients. Major surgery should probably be thought about twice and then still decided against while on the high seas. Most RFA's now either carry helicopters or have them available on the accompanying warships, and they are a boon (if a very expensive one) for ambulance work.

The doctor, of course, must be prepared to travel fairly often in these "air taxis" as well as being winched up and down to other ships that put out calls for medical help but have no landing facilities. I found these activities very exciting and fascinating, as were Jack-stay or sea-boat transfers from ship to ship. The former is a pulley system for passing cargo, human or otherwise, between vessels steaming at approximately 16 knots on parallel courses and about 120 feet apart—a piece of incredible seamanship which the RFA takes in its stride.

The third advantage is the opportunity to travel widely. Port visits last anything from four to 14 days, and the maximum time at sea in one stretch is about three weeks. For example, during last year I visited (in a 10-month deployment) Norway, Gibraltar, Italy, Greece, Turkey, Egypt, Oman, Pakistan, India, Kenya, Singapore, Hong Kong, the Philippines, and Japan. While in port it is usual to get the local medical services to cover for the ship, giving the doctor the opportunity to play tourist.

The fourth advantage follows from this—after the 10-month stint I became entitled to five months' leave. All RFA officers accumulate 195 days' leave for each 12 months served. Although the usual pattern is to do six months on a ship, take three months leave, etc, this may be varied by the ship's commitments or one's own wishes.

The salary is approximately £12 900 rising to £14 360 after three years' service. This salary, however, has to be considered in conjunction with free board and lodging, excellent food, and a rebate of 25%, approximately for every day over 30 in any one year that one is out of British waters. The long periods of leave provide the opportunity to do other remunerative locum work if required.

The accommodation on most ships is spacious, with a suite of three rooms—bedroom, dayroom, and bath. This enables the doctor, as a senior ship's officer, to have his wife accompany him,

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ship's commitments and captain permitting. Last year two of my teenage children flew out to the ship in Singapore for three weeks, my wife and other son joining us in two of those weeks in Hong Kong.

An initial three-month trial period with the RFA is followed by a contract that is renewable annually, but with three months' notice either way, as in the National Health Service. An important point to consider here is that all supernumerary officers are mutually transferable between the NHS and the RFA. A further advantage is a well-equipped three or four-bed sickbay on each ship, plus a consulting room. Obviously, with the complement of 160 people, plus or minus a few wives, work is light, consisting of a mixture of casualty and general practice.

Finally, sport and keeping fit are problems aboard ship, although some carry a swimming pool, sailing dinghy, exercise machines, etc, and badminton can be played in the hangar. The disadvantages are fewer but equally important. First of all, there may be up to three months' delay between application and acceptance. Secondly, there is no career structure. I would advise doctors to think of it as a break of two to three years, although many do it for much longer. Boredom from time can be a major problem for those who are not prepared to indulge in lots of reading and hobbies such as navigating, photography, model-making, and painting. In addition one can play a full part in the social life of the officers' mess as president, sports officer, film officer (three films are shown weekly while at sea), or perhaps ship's librarian.

Being away from home for up to six months, is, of course, a major draw-back, and while mentioning homesickness, sea-sickness comes readily to mind at another disadvantage for those unfortunate enough to suffer from it. The doctor has to provide his own uniform initially, but this can at first be kept to basic essentials, and a £60 allowance is payable if the contract is taken up after three months. My initial outfit was about £200. Finally, the temptation to put on weight because of overindulgence in food and drink is enormous, especially as the latter is usually duty-free outside British waters. There are those I know, however, who would expect this to be included with the advantages.

If you think that this kind of life might be for you and you are 30 to 55 years old you may obtain further details from me, Dr Robert Cruthers, tel 01-657 2220, or by writing to: Mr Peter Wythe, DSTO (N) 7444, Ministry of Defence, Empress State Building, London SW6 1TR.

ONE HUNDRED YEARS AGO

The art of giving requires to be learnt not less than the art of getting. It is not enough, even among those who are so happy as to have acquired the love of giving, and to have cultivated the sympathies which make it a chief pleasure in life, who have learnt how to give, where to give, and what to give. An East-end clergyman, sadly experienced in the ways of the poor, and wisely discriminating in his life and devoted study of a ministration to these wants, has often said to us that "folish money" is sometimes superabundantly offered; but, for the deeper, less apparent, and less pathetic, wants of the poor, he finds the greatest difficulty in collecting the necessary funds. The poor man who is in a sudden cry of money, or of pathetic accident, or of sensational distress, is put forth: the money which is thrown into the lap of the loudest petitioner, without investigation of his machinery for giving, or his test of fitness of the recipients; without adequate inquiry as to the funds already at his disposal, or to the extended means of preventing imposture, and dealing with surplus; money which pours in from "strongly worded" hospital appeals, and which is tossed into the hands of the vicarious beggar, without personal interest or inquiry into the way in which it has been used. This is the easy tribute which soft characters readily pay to any tale of physical distress. Sensible money and sensible gifts are those which are given to the poor, and which are not the unsensational poor; pension funds, convalescent funds, well regulated low-commitment, and administrators of systems such as those which have been set on foot in London by Miss Emma Coats, Miss Emma Coats, Mrs. Barnett, and others, on the Elberfeld

system, in which inquiry precedes giving, supervision continues throughout the disposal of the gifts, and care is taken that the donation is one really suited to the real requirements of the petitioner, and is not the means of abuse or incitation to continuous pauperising begging. The money which is given to the poor, and which is not the means of abuse or incitation to continuous pauperising begging, is largely of this discriminative and intelligent character; if people were more willing to give themselves as well as their money, smaller funds would do more good, and it is a sad case with the enormous benefactions so largely abused. Even a small thing, this want of care, is visible. Nothing is in a small, but by no means unimportant way, more acceptable to hospitals than timely gifts of flowers, and books to adults, and toys for children. But a hospital superintendent writes to complain, and justly to complain, that the flowers are often crushed under a hamper of hospital stores, and that the books are often the useless; the toys are broken and out of gear; and the books are the more unreadable residue of overlooked bibliographies, or scattered wails of a careless household. Such gifts are often more with what are superficially called "the best intentions"; intentions cannot, however, be accepted as the best unless they spring from a somewhat deeper source, and are guided by more thoughtful intelligence. The giver needs to remember that, in his gift, his character, his thought, and himself are reflected; and, for the sake of self-discipline, as well as for the sake of others to whose gifts he should intend to be the intention of something more than the careless and thoughtless tossing away to the poor of a residue unused or easily dispensed with by himself. (*British Medical Journal*, 1881.)