options; (ii) the calculation of a realistic patient load for doctors working in practice based departments (demand per patient varies substantially both between and within cities); (iii) the desirability of supporting an academic training grade; (iv) a level of "overhead" funding for the administration of an attached practice which is compatible with the development of forward thinking systems for delivery of patient care; (v) the need for reasonable remuneration of service general practitioners who undertake attachment teaching of students in their own practices.

Whether target list sizes in practice based departments should be half the area average (or lower, allowing for the reality that clinical work expands if time is available for it) needs further discussion. Where an existing practice is larger than target additional clinical staff may have to be employed, perhaps working exclusively in patient care.

Estimation and provision of a proper remuneration of part time academic staff teaching students in their own practices has been a longstanding need. Although it is difficult to generalise, part time general practitioner teachers are commonly requested to provide one four week attachment for each senior student in the school concerned. It is difficult to value or to cost attachment teaching, but the presence of a student will add about two hours to the day's work of a teaching practice. At that level a four week attachment might equate to 40 hours teaching. At £10 an hour this equals £100 a week. This would be equivalent to around £4000 for a 40 week teaching year, similar to the present postgraduate training fee.

COSTING

A department teaching a four week course to 150 students undertakes 600 weeks of teaching, which equals 15 FTEs a year. Additional teaching activities are likely to bring the figure to around 20 FTEs per department a year. There are various ways of costing the package outlined in the previous paragraph. A target annual budget in the order of £400 000 per department seems a reasonable basis to work from. This sum equates with a figure of £20 000 per FTE student taught—around three times the UGC FTE clinical student allowance, but probably still much less than the de facto UGC+SIFT/NHS resources available to hospital clinical departments.

IMPLEMENTATION

Approximately one third of the money as costed above is already provided within the university block grant although it is not always made available to fund the teaching that is being done. About half the remainder can be earned from NHS patient care carried out in a typically sized practice based department. (Practice linked departments will cost less because of lower overheads.)

The remaining element equates with the SIFT/NHS analogue and the committee of heads of departments of general practice have attempted to raise this money from the Department of Health and Social Security/Scottish Home and Health Department. Support in principle for an NHS contribution being made has been expressed but no legally acceptable mechanism for its implementation has been identified.

It appears that one feasible, and so far unexplored, way of channelling NHS money to departments of general practice might be through redefinition of the level of, or conditions relating to, the "basic practice allowance" elements of remuneration as in paragraph 12 of the Statement of Fees and Allowances payable to general medical practitioners.

Different levels could be set (i) for doctors in full time academic posts with principal status in practice based university departments, (ii) for academic staff holding principal status and working in linked practices, and (iii) for doctors working as full time NHS principals and taking students on attachment. Limits would need to be set on how many posts could be recognised in each category, but these are predictable in terms, on the one hand, of the number of departments of general practice which exist and, on the other hand, in terms of the number of students in medical schools. Continuing with the outline estimates discussed above, it appears that the money required to compensate for the absence of a SIFT analogue would be unlikely to exceed £4m.

Implementation of such a proposal would require the support of the General Medical Services Committee and would imply the overall acceptance by the general practice community of two main principles: firstly, the desirability that there should be adequately funded departments of general practice in medical schools, and, secondly, that practices that accept medical students on attachment should be properly supported for doing so.

Lesson of the Week

Os subtibiale mistaken for a recent fracture

ANTHONY CORAL

There are a large number of accessory bones in the foot and ankle. They may be mistaken for fractures if their characteristic location, and usually smooth outline, is not recognised.¹ The os subtibiale is an uncommon accessory bone that occurs immediately distal to the medial malleolus. I report an unusually large example of this bone that was mistaken for a fracture.

Case report

A 38 year old Spaniard presented with a one day history of pain and swelling over the medial malleolus after a "twisting" injury to the left foot. There was no other medical or surgical history. Examination showed that the man was nervous and had a tender swelling and bruising over the medial aspect of the ankle. The initial radiograph (figure) showed a smooth, rounded bone, 1.5 cm in diameter, at the posteroinferior aspect of the medial

Determining the sites and appearances of the accessory bones in the feet and ankles is important; failure to recognise them may lead to unnecessary fixation and immobilisation

malleolus. He was taken to theatre, where a curved incision was made over the medial malleolus. No haematoma resulting from fracture was seen, which was interpreted as indicating that the "fracture" was an old one. The bone was reduced with difficulty using two K wires and a tension band because it would not take a screw. The inadequate reduction was evident during fluoroscopy. The patient made a good recovery. The initial films were returned for reporting when postoperative films were obtained (figure).

Discussion

Accessory bones occur frequently in the foot and ankle. They are usually asymptomatic. The os subtibiale is an uncommon accessory

St Mary's Hospital, London W2 1NY

ANTHONY CORAL, MB, MRCP, registrar in radiology

LEFT—Initial radiograph showing well rounded accessory bone distinct from normally shaped medial malleolus. There is minimal soft tissue swelling. RIGHT—Ankle after attempted reduction.

bone that occurs immediately distal to the medial malleolus; it was found in 0.9% of ankles in a large series.²

There are various appearances of ossification in the subtibial region. In children an independent ossification centre is seen at the tip of the medial malleolus, being especially frequent at age 8 and 9. This becomes part of the main body of the tibia by the age of 12.³ In adults a small osseous element, the os subtibiale, may be seen inferior to the medial malleolus, varying in size from minute to pea sized. It is often round and may contain a dense central nucleus. There may be multiple bones.⁴

The os subtibiale is thought to represent an unfused epiphyseal ossification centre.⁴ Occasionally, however, trauma may lead to the

presence of a small, angular bony fragment in this region.⁵ In some cases the fragment is accompanied by a similarly sized and shaped defect on the inferior aspect of the medial malleolus.⁶ The os subtibiale in this man was remarkably large, smooth, and rounded, and there was no defect in the normally formed medial malleolus to indicate a possible traumatic origin.

The misinterpretation of the films in this case report led to the unnecessary operative fixation of an accessory ossicle, the os subtibiale, which is a normal variant. To avoid making this mistake it is necessary to be aware of its existence and its usual features. It is important to show the integrity of the medial malleolus on good quality radiographs, because a defect in either the anterior or posterior parts of the malleolus raises the possibility of a fracture. The films in this case clearly show the normally formed larger anterior colliculus and the smaller posterior colliculus of the malleolus. As with other developmental abnormalities, the os subtibiale may be present bilaterally, so that in cases where confusion exists radiographs of the opposite ankle may help by showing the same, or similar, appearances. The incidence of this bone occurring bilaterally, however, has not been established.

This case shows the importance of knowing the site and appearance of the accessory bones in the feet and ankles, because failure to recognise them may lead to misinterpretation as a fracture and unnecessary fixation and immobilisation. Radiologists are aware of these normal variants and are likely to report them correctly. A scheme of immediate reporting for casualty films would reduce similar errors of diagnosis.

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Patients attending hospital with skin contamination by any type of chemical are usually washed with copious quantities of water. This is suitable after contamination with water soluble compounds but it would seem to me to be relatively useless for many non-water soluble compounds, particularly if they are also greasy. Clearly, there are specific regimens for specific chemicals but how should we be decontaminating the skin of patients brought to hospital after chemical contamination?

Skin decontamination may be necessary to minimise local tissue damage, prevent absorption of toxic substances, and protect those who are treating the casualty. Skin lavage with water (after removal of contaminated clothing) is usually adequate provided that it is carried out correctly. It must be performed for sufficient length of time, though there is probably little benefit in persisting for longer than about 10 minutes. It is important to remember that the areas around the eyes, mouth, and nostrils, if contaminated, should be cleaned first. Attendants should wear gloves, aprons, eye protection, etc as necessary. Decontamination treatment to limit damage to local skin and underlying tissue by corrosive chemicals, usually strong acids or alkalis, is the commonest condition encountered. In these circumstances flooding of the affected area with (preferably) running water, until the pain subsides, is usually adequate. Greasy or water insoluble substances are usually similarly removed, as the mechanical action of washing is probably as important as the solvent properties of water. If the material sticks more tenaciously the skin should be washed with soap. Solvents should not normally be used as they may affect the integrity of the skin barrier. Substances that are firmly adherent to the skin may be removed by washing with 1% cetrimide or with potassium permanganate solution. Such treatment is unlikely to be necessary, however, unless there is a risk of residual radioactivity from the contaminant.

Certain chemicals such as hydrofluoric acid and phenol are not only corrosive but are also potent systemic poisons, readily absorbed through the skin. After skin lavage has been performed they must be "neutralised" by

the application of calcium gluconate¹ and polyethylene glycol² respectively. Many commercial chemicals may be absorbed through the skin but few cause acute poisoning or local damage. Those that do, such as organophosphorus insecticides and certain solvents, may be removed adequately with water.—W R LEE, professor, and A R SCOTT, lecturer, of occupational health, Manchester.

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Within areas where goitre is endemic its prevalence often varies geographically. Why is this and is there any evidence of geological goitrogens?

Undoubtedly the major cause of endemic goitre is environmental iodine deficiency. Hence it is common in mountainous areas far from the sea such as the Alps, the Andes, and the Himalayas, where the iodine content of the soil, water, and food is low. There is an inverse correlation between the environmental iodine and the incidence of goitre, and the latter may be dramatically reduced by iodine prophylaxis. Nevertheless, your questioner is correct in pointing out that the prevalence varies geographically within areas where goitre is endemic. Other factors are therefore relevant. In parts of the Congo cassava is the staple food and it contains an active goitrogen in the form of thiocyanate. In certain parts of Colombia the well water contains an aliphatic hydrocarbon with thiourea like antithyroid activity. In the Himalayas the prevalence of goitre correlates with the fluoride concentration in the water. Another factor that may be important is a genetically determined abnormality in hormone synthesis as this is especially likely to express itself in isolated communities where inbreeding is common.—C W H HAVARD, consultant physician and endocrinologist, London.