

Nalidixic acid is widely used in hospital and general practice for the treatment of urinary tract infections, both in children and in adults, and it would indeed be unfortunate if doses other than those recommended by the manufacturers were quoted in medical journals and used unsuspectingly by doctors.—I am, etc.,

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Achondroplasia and Leukaemia

SIR,—We were interested in the Clinico-pathological Conference (3 December 1966, p. 1371) describing immunologic deficiency and aplastic anaemia in an infant with achondroplasia. Dr. V. A. Fulginiti and associates (22 April, p. 242) and Dr. J. A. Davis (8 July, p. 110) have written of similar cases, prompting us to report the case history of an achondroplastic child who developed leukaemia, and to speculate on a relation between this complication and the other disorders observed with achondroplasia.

On 3 January 1965 a boy aged 5 years was admitted to the Children's Cancer Research Foundation in Boston with the abrupt onset of a superior vena caval syndrome. A classical picture of achondroplasia had been evident since birth, in the absence of a family history of dwarfism or congenital defects, and during infancy the patient had respiratory difficulty, which was attributed to a deformed thoracic cage. In addition to achondroplastic dwarfism examination showed facial oedema, venous distension in the neck and chest wall, and hepatomegaly. The white-cell count was normal with 40% lymphocytes. X-rays revealed an anterior mediastinal mass and bony changes consistent with achondroplasia. A presumptive diagnosis was made of lymphosarcoma. Because of rapidly increasing dyspnoea, the patient was treated with x-ray therapy and adrenal steroids, followed by dramatic improvement. Intravenous vincristine, 0.6 mg. weekly, was given in an attempt to prevent conversion of lymphosarcoma to leukaemia.

On 4 April the patient complained of headache and vomiting. The white count was 13,000 with 4% blast cells, and bone-marrow aspiration showed acute lymphocytic leukaemia. Lumbar puncture revealed meningeal involvement with leukaemia, which was treated with intrathecal methotrexate. One month later the white count was 19,400 with 44% blast cells, and the platelet count was 7,000. Despite treatment with methotrexate, cytoxan, and adrenal steroids the subsequent course was progressively downhill, and the patient died on 12 September 1965. Necropsy revealed the osseous abnormalities of congenital achondroplasia, extensive leukaemic infiltration of organs, a haemorrhagic diathesis due to thrombocytopenia, and terminal bacteraemia.

To our knowledge there have been no previous reports of achondroplasia and leukaemia occurring in the same person, so that this case may represent a combination of chance events. Its significance is enhanced, however, by the concurrence of achondroplasia with immunologic deficiency and marrow aplasia, conditions which independently appear to carry an excess risk of leukaemia or lymphoma.¹ Thus leukaemia may be an added manifestation of an immuno-haematologic defect occurring in certain patients with achondroplasia.

If this association is not due to chance one may wonder about the role of chromosomal

abnormalities which have been observed occasionally in achondroplasia.² It is of interest that the congenital disorders which are at high risk of leukaemia (Bloom's syndrome, Fanconi's syndrome, and mongolism) have chromosomal abnormalities in association with skeletal defects or dwarfism.³ However, the recent description of osteogenesis imperfecta and childhood leukaemia in two siblings⁴ suggests that the relation of leukaemia to heritable disorders of the skeletal system need not be mediated by cytogenetic defects. As noted by Dr. Davis, the disorders associated with achondroplasia seem to extend the list of syndromes which bring together genetically determined diseases of the bone and bone marrow.—We are, etc.,

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Smallpox Revaccination

SIR,—In our county the health authorities are advocating routine revaccination against smallpox of children between 8 and 9 years of age.

My partners and I think this is against modern teaching. Besides carrying a slight risk to the child, so many people require yet a further revaccination in their late teens owing to foreign travel. This appears to make procedure at 9 years superfluous.

We have written to our medical officer of health saying that we are advising parents against this routine procedure. He has replied suggesting that we alone are upsetting the records for the county. Are we really being "square" or are there other general-practitioner nonconformists?—I am, etc.,

Horsham,
Sussex.

E. PERKINS.

Changed Character of Osteomyelitis

SIR,—I had not intended to enter into correspondence on your leading article (29 July, p. 255), as I have previously discussed most of the controversial points.¹⁻⁴ However, I have been unable to resist the temptation to make a few comments.

My own experience supports the opinion of Mr. J. H. Bulmer (19 August, p. 497) that cloxacillin is the antibiotic of choice before the sensitivity of the organism is known, and in this context Mr. J. H. Green's paper (13 May, p. 414) was a most helpful contribution. I am quite convinced that bacteriostatic antibiotics such as the tetracyclines have no part to play in the management of staphylococcal osteomyelitis, and there is no better one than cloxacillin for use against the penicillinase-producing staphylococcus. A further

disadvantage of the tetracyclines is their relative inability to diffuse into dead bone.⁵ I have shown quite conclusively that penicillin and methicillin diffuse readily through thick-walled abscesses and remain in the infected tissue long after the blood level has fallen to zero.

I regret that I cannot be equally enthusiastic in support of Mr. J. H. Bulmer's view that aspiration of subperiosteal pus is an efficient method of drainage. Aspiration can in fact be very difficult, because the pus may be deep-seated and impossible to localize; nor is it a complete decompression, which requires drilling of the bone, and in any case it may well have to be repeated—an important consideration, particularly in children. Surgical drainage, on the other hand, is simple and produces a complete decompression. The bone must be drilled because pus under considerable tension is often present before a subperiosteal abscess forms. Prompt relief of pain and prevention of bone death is the result of surgery at this early stage of the disease.

With regard to the development of secondary infection and sinus formation after surgery I can only repeat that it has not been my experience. It certainly occurs in some patients when surgery is performed late (after about the third or fourth day of the illness), by which time the story of the disease has been written. I think this is the reason for the difference of opinion on this aspect of the problem. It is important, therefore, when referring to surgery to indicate when it is performed and what we mean by early and late. My own series indicated that the blood culture is negative in at least 50% of patients with acute osteomyelitis. It is an unreliable method of obtaining the organism for culture and sensitivity tests, and most laboratories cannot give a report in less than 48 hours, which is far too long to wait. A report on pus can be given in less than 24 hours, and is therefore of some practical value.

Finally, Sir, it is encouraging to note that most of your correspondents think that surgical decompression has an important part to play in the management of acute osteomyelitis in its early stages, as Trueta advocated 13 years ago⁶ and supported by my own studies five years ago. The best method of treatment, despite all that has been written in the past, is now a controversy not so much among surgeons but rather between physicians and surgeons. Acute osteomyelitis is only one of many examples of this phenomenon, which is both stimulating (though sometimes frustrating) and inevitable when two such disciplines are involved.—I am, etc.,

London W.1.

NIGEL H. HARRIS.

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National Kidney Centre

SIR,—As one of the founder trustees of the National Kidney Centre I would refer to the letter (22 July, p. 241) written by our medical director, Dr. S. Shaldon, and the news paragraph (p. 252) "Kidney Centre to Close." In this connexion I would draw