Science and sinuses

The Journal now has its own research section. Research is 'organised curiosity' and does not always need a laboratory, ancillary staff, and expensive equipment. The main role of most readers of the Journal is in clinical orthopaedics; some may feel that basic research often seeks answers to interesting questions, but that they are not always clinically relevant. Another role concerns budgets for medical services; those who control them now demand evidence that diagnostic and therapeutic activities will provide good, cost-effective outcomes. Many current advances in orthopaedics relate to sophisticated modern technology, but infection remains an important threat to successful outcomes, and is a major concern in the less developed world.

Bone and joint infection, whether primary or secondary to operation, deserves more research. The initiation and outcome of infection depend basically on the virulence of micro-organisms and the resistance of the host, but secondary changes in the structure and texture of bone make it difficult to eradicate established chronic osteomyelitis. The identification of the organism, or organisms, should precede definitive treatment because knowledge of biological behaviour and sensitivities to antibiotics will give the best chance of cure. In this context, the reliability of samples of discharges from the sinuses of chronic osteomyelitis has been debated, in terms of the laboratory identification of the

causative organism. A paper in this issue of the Journal (pages 462-6) helps to resolve that problem.

The author has shown that science need not be complex, expensive or sophisticated. Good science, like good surgery, needs discipline, scrupulous honesty, meticulous attention to detail, controlled conditions and appropriate handling of results, including statistics when these are needed. The sinuses of chronic osteomyelitis may not be an appealing subject for research, but there is no shortage of such clinical material in developing countries. This paper answers some questions about the reliability of sampling sinus-track specimens.

The study is instructive in several ways: a clinical question is answered by a simple cheap experiment; the importance of methods of obtaining specimens for bacterial culture is emphasised; and it is shown that treatment with drugs rather than surgery may be successful when tuberculosis or actinomycosis has been diagnosed from sinus-track cultures. The author has also provided the sensitivity, specificity, and predictive value of his methods. Countries with a high incidence of some musculoskeletal conditions could well use similar clinical research to resolve questions which are still debated in the more affluent world, but difficult to answer because small numbers of cases do not provide enough statistical power.

Research has a broad spectrum; most clinical papers involve some and therefore the subdivision of the Journal is arbitrary. Simple clinical studies without sophisticated equipment can address outcomes, and like this paper from Iraq, help to increase cost efficiency as well as provide benefit for patients.

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