

only in those women who have unremitting dyspareunia associated with focal vulvitis for at least six months.⁵

Dyspareunia is a distressing symptom that may lead to serious conflicts in relationships, and those conflicts are sometimes considered to perpetuate introital pain after conventional treatment has failed. Perhaps, however, failure to examine the vulva adequately has meant that the doctor has failed to diagnose focal vulvitis in such patients.

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Keeping up with orthopaedic epidemics

Britain is experiencing an epidemic of surgery for fractured necks of the femur and for arthritis of the hip. The work load and its economic implications are posing a formidable challenge to the Health Service. Over 100 different types of total hip replacement are available, varying in price from just over £100 to well over £1000. There is an urgent need to compare the different prostheses, yet controlled trials that will produce statistically meaningful results will take at least 15 years. Thus, if Britain is to remain at the forefront of researching and developing implants techniques must be devised for predicting the reliability and longevity of an implant within months rather than years. Such techniques are being developed and need encouragement.

The epidemic of fractured necks of femur is overwhelming the wards allocated to the trauma service and spilling into the beds needed for both general surgery and elective orthopaedics.¹ Not only is the incidence increasing with an aging population but also the risk at all ages is in itself rising.² In elective orthopaedics a similar epidemic is occurring: in 25 years the number of total hip replacements performed in Britain has risen to 35 000 a year. By 1990 the government expects the annual number of operations to have stabilised at 50 000 (N Fowler, Conservative Party Conference, Bournemouth, 1986). Total knee replacements lag a few years behind—only 10 000 were performed last year. American experience suggests, however, that the

number will eventually rise to equal the number of hip replacements.

The traditional concepts of patients "earning" their operations is being abandoned in many units, and the days of most elderly patients taking their original joint replacement to the grave with them are now over. Young people crippled by an arthritic joint are determined, despite dire warnings, to opt for a joint replacement immediately and face the consequences of implant failure later. Yet revision rates in young patients may be as high as 25% within five years.³ A new epidemic of patients requiring joint revision is starting to make inroads into operating lists: in Oxford one in five operations to replace hips are now revisions (J Spivey, personal communication). They require on average twice as much operating time, and patients need to stay in bed longer than those having a primary implant. The results too are not nearly so certain.

The choice of implant is difficult. The criteria are simple—reliability, longevity, and revisability—but the solution is not. Many different types of prosthesis—cemented or cementless—and the choice of approach to the hip multiply the possible permutations into the thousands.

Despite the cemented Charnley hip being one of the first joints to be used in large numbers 25 years ago, it still reigns supreme as the gold standard. Not one of the dozens of "newer," "better," and more expensive implants being used by many surgeons in the Health Service can match the figures obtained with the Charnley hip in proper hands.⁴ Nor can they ever do so. A controlled trial of several hundred implants over at least 15 years would be required to make valid comparisons. There is no prospect of a controlled trial of this size being carried out in the foreseeable future for even one of the implants on the market. Even if it was possible the results would probably be irrelevant by the time they became available. That is why we need techniques to test implants quickly.

A technique using stereo x rays and bone markers has been developed that can measure the migration of implants within their bone beds to within fractions of a millimetre.⁵ The technique is complex but does seem to predict the lifetime of an implant. The immediate implementation of this and other complex measuring techniques will be needed if clinical research is to be used to define the design criteria of a new generation of reliable implants.

Without this research to determine efficacy cost may be the only criterion used to decide the best implant for use in the health service. This would block all improvements in implant design in Britain and would sound the death knell of the British implant industry. Conversely, encouraging this type of research would allow Britain to move ahead in the forefront of implant development while ensuring that the health service obtains the best implants in both clinical and economic terms.

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