who, like myself, have carried out this procedure uneventfully in patients with values of less than 1 litre. Other factors should also be considered, including the presence of airway liability, respiratory failure, and exercise tolerance. Of course, Drs S P Ruffles and J G Ayres were correct to perform a posterior myotomy on their patient. It is simplistic to suggest that the search for a bronchial carcinoma should be curtailed because the patient would not be a candidate for surgery.

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Usogoodia internal fixation of bone lesions in myelomatosus

Sir.—The article by Dr Alena Kubie and colleagues on the internal fixation of bone lesions in myelomatosus using bone cement presents a novel approach (11 July, p 98), but there are several aspects that we are unhappy about.

The use of methylmethacrylate cement in combination with metallic implants to treat and prevent pathological fractures is well documented. In such cases the cement acts as a filler, either improving the purchase of screws or stabilising an intramedullary rod or nail. The mechanical strength of a column of cement, however, as used by Drs Ayres and colleagues, is poor when subjected to cyclical bending stresses, and thus it is not suitable to use as an intramedullary rod. Though the treatment seemed to work in this case, it is not certain that a fracture would have occurred without it.

In view of the inherent weakness of the cement and the difficulty of treating a fracture when the medullary cavity is filled with cement, we have serious reservations about the method and do not believe that cement alone should be used. It is quite straightforward to insert a thin intramedullary nail to give added protection against fractures.

We would also like to take issue over the statement that “local radiotherapy would probably precipitate a fracture.” We know of no evidence to support this assertion; on the contrary, radiotherapy is often used as an adjunct to internal fixation for prophylaxis against pathological fractures in malignancy.

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Resistance of clinical isolates of Haemophilus influenzae

Sir.—Dr Mair Powell and colleagues (18 July, p 176) provide the results of a survey of the prevalence of antibiotic resistance in isolates of Haemophilus influenzae from England and Scotland. Over the same period a similar investigation was undertaken in Wales under the auspices of the Standing Specialist Advisory Group for Microbiology.2 Between January and April the 21 microbiology laboratories in Wales submitted all isolates of this species to the microbiology department at Gwynedd Hospital, Bangor; 1440 strains received were confirmed to be viable H influenzae. Antibiotic susceptibilities were determined by measuring the minimum inhibitory concentrations of the following antibiotics: ampicillin, cefaclor, chloramphenicol, tetracycline, trimethoprim, and sulphadiazine. An agar dilution technique was used, incorporating doubling dilutions of antibiotics into Oxoid DST agar supplemented with 0·25% lysed horse blood and nicotinamide adenine dinucleotide 10 mg/l (BDH Chemicals Ltd). An inoculum of 10⁶ organisms (10⁵ in the case of sulphadiazine) was applied to the agar surface before incubation overnight at 37°C without carbon dioxide. Strains were tested for β-lactamase production using both a pencil-inactivation method and chromogenic cephalosporin.3 Organisms were considered to be resistant if more than 2·0 mg ampicillin, 4·0 mg cefaclor, 2·0 mg chloramphenicol, 2·0 mg tetracycline, 8·0 mg sulphadiazine, or 4·0 mg trimethoprim/l were required for inhibition.

The overall results were as follows: 8·9% resistant to ampicillin (8·4% β-lactamase positive), 1·6% resistant to cefaclor, 1·7% resistant to chloramphenicol, 2·8% resistant to tetracycline, 6·2% resistant to sulphadiazine, and 4·6% resistant to trimethoprim. These are similar to those reported by Dr Powell and coworkers, who quoted the percentage resistance to be 7·8% for ampicillin (6·2% β-lactamase producers), 1·7% for chloramphenicol, 2·7% for tetracycline, 3·5% for sulphamethoxazole, and 4·2% for trimethoprim. Slightly different criteria were used in the two studies to define resistance to sulphamamide and trimethoprim.

The prevalence of β-lactamase producers varied among different locations in England and Scotland. That geographical differences may exist in the United Kingdom is emphasised in our study by the significantly higher overall proportion of such strains than was shown in the authors’ study.

Our results also confirm that multiple resistance is now firmly established in this species. Of all the strains, 67 (4·6%) were resistant to two or more of the antibiotics tested and 13 (0·9%) were resistant to four or more (their sensitivity pattern is shown in the table). One of the strains resistant to ampicillin, chloramphenicol, tetracycline, sulphonamide, and trimethoprim was a type b organism isolated from the cerebrospinal fluid of a patient with meningitis. The strain resistant to six antibiotics was a non-typhoidal, non- β-lactamase producer isolated from sputum.

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<thead>
<tr>
<th>Organisms resistant to four or more antibiotics encountered among 1440 strains of Haemophilus influenzae isolated in Wales in 1986</th>
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<tr>
<td><strong>Antibiotic resistance</strong></td>
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<tr>
<td>Ampicillin (β-lactamase producer), tetracycline, sulphonamide, and trimethoprim</td>
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<tr>
<td>Chloramphenicol, tetracycline, sulphonamide, and trimethoprim</td>
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<tr>
<td>Ampicillin (β-lactamase producer), tetracycline, sulphonamide, and trimethoprim</td>
</tr>
<tr>
<td>Ampicillin (non-β-lactamase producer, cefaclor, chloramphenicol, tetracycline, trimethoprim, and sulphonamide)</td>
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Effectiveness of treatment for infertility

Sir.—Professor Richard J Lilford and Dr Maureen E Dalton (18 July, p 155) suggest that more emphasis should be placed on in vitro fertilisation and gamete intrafallopian transfer when treating infertility. They believe that in vitro fertilisation is superior to conventional treatment, which, they conclude, results in conception in only 18% of patients.

The latest report of the Voluntary Licensing Authority, however, shows that in vitro fertilisation is very unsuccessful. Of 4308 treatments conducted in 3717 patients last year, only 364 live births resulted—a success rate of 8·5% per treatment. In vitro fertilisation remains (and will remain for some time) the most disappointing and expensive of all treatments.

The authors claim that only 15% of women conceive after tubal surgery, but they quote no statistics. They ignore many large microsurgical series, including that of Bouzouz and Casanas-Roux,4 who operated on 600 patients; 60% of their patients had intrauterine pregnancy after fimbrioplasty and 31% after salpingostomy. Salpingostomy gave 22-48% intrauterine pregnancies, depending on the degree of damage. Any ligation was performed with comparable results. Laparoscopic surgery, also ignored, gives excellent results.5 Cornual microsurgery is more successful: over 50% of patients conceive after tubal surgery in one or two cycles.6

The authors are curiously pessimistic about anovulation. Large series show that, even when clomiphene has failed (under 50% of women), gonadotrophin treatment results in pregnancy in many cases.7 In view of this, there are no data suggesting that in vitro fertilisation or gamete intrafallopian transfer is more than of minimal value for anovulation.

So-called “unexplained infertility” is, we submit, mostly a double discrimination for in vitro fertilisation. Many cases are simply inadequately investigated.8 A study of over 100 patients with “unexplained” infertility referred for in vitro fertilisation to Hammersmith Hospital this year suggests that such patients have a “highly abnormal psychological profile.” There is no proper study to justify their opinion nor is this reason to undertake gamete intrafallopian transfer or in vitro fertilisation, both of which are extremely stressful. If in our experience these patients require thorough investigation followed by specific, mostly conventional, treatment.

Certainly all treatment for male infertility is disappointing. Nevertheless, there is virtually no evidence that gamete intrafallopian transfer or in vitro fertilisation offers much except in isolated cases. More research is required, but what is meant by the high sounding statement that “improvements . . . depend on a deeper understanding of the hormone function and gene transcription of sperm?”

Of course “a much more scientific approach to infertility” is needed. However, these authors hardly give confidence in their inadequate review. They also show superficial knowledge by misspeecting technical terms. BMJ leaders may be controversial but they should not also be authoritative.

One risk besetted by complex technology. Most university gynaecology departments tot with the idea of setting up in vitro fertilisation; few have adequate endocrinological training programmes and good microsurgery is rare. It is thus inevitable that, however well-intentioned, patients believe that inadequate infertility services can be circumvented by recourse to the latest technique. Let us remember that in vitro fertilisation cannot replace proper diagnosis and specific treatment for the vast majority of infertile couples.

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