Correspondence

Letters to the Editor should not exceed 500 words.

Undescended Testicle

SIR,—Mr. D. J. Tibbs has asked for more information about the incidence of malignancy in undescended testes (17 July, p. 169).

In a group of 192 patients with testicular tumours seen at the Royal Marsden Hospital between 1930 and 1962 21 gave a history of having had one or both testes undescended. Five were said to have had both testes undescended at birth. In two of these patients the testes remained in the abdomen, and both developed a seminoma in their early 20's: one died rapidly from metastases and the other had the uninvolved testis removed at the same time as the malignant one. One patient, who had bilateral inguinal testes, developed a seminoma first in the left testis and then 11 years later in the right testis. The other two patients gave a history of both testes descending without treatment before puberty, so we have no definite evidence that they really were undescended. However, one of these patients developed a seminoma in both testes simultaneously—a very rare occurrence—and the other an anaplastic teratoma in one testis. He has remained well for seven years.

Thirteen patients with a history of unilateral undescended testis developed tumours in the testis involved. Nine of these patients had had the testis brought down by surgery—two before puberty at 8 to 10 years, five at

puberty around 14 years, and two after puberty.

Three patients with untreated right inguinal testes developed tumours in the normally descended left testis. Two patients who developed seminomas in an undescended testis went on to develop a seminoma in the other testis, which had descended normally.

Of the 28 August 1965 series who develop one or both testes being undescended at birth. Undoubtedly there is a tendency for an undescended testis to develop a tumour, but it is not only the testis which remains undescended until after puberty which develops tumours. In this series five patients with an undescended testis developed tumours in the normally descended testis, seven patients developed tumours in a testis which had been brought down by surgery into the scrotum before or at puberty, and two developed tumours in testes which were said to have descended without treatment before puberty.

It does appear that there must be some other stimulus to tumour development in these patients, and it may possibly be some hormonal imbalance.—I am, etc.,

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Laevadosin in Muscular Dystrophy

SIR,—In 1959 Beckmann¹ first recommended Laevadosin for the treatment of progressive muscular dystrophy. In 1964 Pearce *et al.*² reported the results of a double-blind controlled trial, using this form of treatment over a period of six weeks in 10 cases of muscular dystrophy of the Duchenne type, and the results achieved in these cases were compared with similar assessments carried out in 10 control patients of comparable age and sex. More recently, Pearce *et al.*³ have reported the results of a continuation of this trial in half of the original group of patients over a six-month period. In neither case were the results achieved with Laevadosin superior to those in the control group of cases. It was therefore decided to extend the trial for a further six months in the hope that conclusive results might be obtained, and we now wish to report briefly the results obtained in half of the original group of cases at the end of a 12-month period.

Nine of the 10 patients originally selected completed the whole one-year period of treatment; unfortunately one of the patients in the control group died suddenly with an acute respiratory illness during the course of the trial. Hence five of the patients received Laevadosin in a dosage of 5 ml. three times

weekly by intramuscular injection, and the four control patients received oral calcium lactate 300 mg. three times daily by mouth. Neither the patient nor the doctor assessing the results of the treatment was aware as to which patient was receiving the active remedy and which the control. Muscle power in these cases was assessed first according to the Medical Research Council scale and secondly by means of a spring balance according to the methods described by Pearce *et al.*^{2,3} The serum creatine kinase was also estimated in all cases at monthly intervals throughout the trial.

The analysis of muscle power at the end of the trial, when assessed both with the spring balance and the M.R.C. grading, demonstrated no significant difference in the results produced by the two forms of treatment. For the spring balance the mean differences in percentage improvement at nine months and 12 months were 14% and 9%, being greater in the controls in both cases. The corresponding 95% confidence limits were from 52% against Laevadosin to 24% in favour of it at nine months, and from 33% against to 14% in favour of Laevadosin at 12 months. Similarly, the M.R.C. grading failed to give significant results at the end of 12 months;

there was no difference in the percentage "improvement" in the two groups. It was also found that there was no significant difference between the changes in serum creatine kinase activity which occurred in the two groups of patients, though it was observed that the measurements could be extremely variable in any individual patient. The average decrease in the activity of this enzyme in the serum at each stage was larger for the Laevadosin-treated group than for the control group, but this was principally due to the findings in one patient whose pre-treatment creatine kinase level was very high.

In virtually every respect, therefore, the average "improvement" due to Laevadosin was negative when compared with the placebo. It was worse than the control in three out of the four comparisons and equal to control in the last. Though only very small numbers of patients were involved, the trial has demonstrated beyond reasonable doubt that Laevadosin does not dramatically modify the natural history of the Duchenne type of muscular dystrophy when given over a one-year period. Whether or not this treatment could have a minor role to play in the management of the disease remains undetermined, but, as it causes considerable discomfort and inconvenience to the patients, we are not now prepared to recommend it in the treatment of muscular dystrophy.—We are, etc.,

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Immunization Against Whooping-cough

SIR,—Recent publications in this journal (3 July, pp. 2, 11) have pointed to the ineffectiveness of vaccination against whooping-cough. There seems little doubt that this is due partly to alterations in the antigenic make-up of *B. pertussis*, but I would like to suggest that there is another factor responsible both for the inefficiency of the vaccines and also for their toxicity. This is incorrect storage of the vaccine. The *British Pharmacopoeia* states clearly that vaccines should be stored "protected from light, and at a temperature of between 2° and 10°." During my experience as a locum in general practice I found that less than 50% of practitioners have refrigerators in their surgeries, and vaccines are often left at room temperature for weeks or even months. In addition, a pharmacist colleague tells me that less than 10% of retail pharmacists