least) from the animal killed into enough rats (six at least), otherwise light infections can easily be missed. In our opinion Ashcroft inoculated too little blood into too few rats; this may be the reason why he isolated so few strains from such a comparatively large sample of animals. Experiments of this kind must be designed with a broad sweep on a large scale and may have to be continued for a considerable time.

Although the isolation of *T. rhodesiense* from a bush-buck is important, it would be interesting to repeat the experiment in areas where *G. morsitans* and *G. swynertonii* are vectors of sleeping sickness to discover whether the same or other species of animals are acting as reservoirs. This note gives only a brief account of our work; detailed results will be published elsewhere.

We are much indebted to Messrs. Harvey, Harmer, and Highton for their enthusiastic work in the laboratory and the field.

REFERENCE

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SECOND BACTERIOLOGICAL STUDY FROM A MATERNITY HOSPITAL

BY

FRANK MARSH, M.D., D.T.M.&H.

Director of Pathology, Epping Hospitals Group

The measures used in a maternity hospital to check the growth and build-up of pathogenic micro-organisms in lying-in wards and nurseries have already been described (Marsh and Rodway, 1954). That paper covered a period of some 38 months, and the methods used were described in some detail. The present paper extends the study for a further four years—to nearly eight years in all.

Floors were treated with "marinol D." After the discharge of a patient, disinfection of a ward was effected by spraying chlorhexidine 1:5,000 from a "microsol" disperser. Blankets were washed in "lissapol N" (1:200) and disinfected with "fixanol C" (1:200). For a while "cirrasol O D" was used, but fixanol C was preferred. Blankets of the mothers were treated every two to three weeks; blankets of the babies every 10 days. Mattress sterilization was by Sparkhall, each time a new occupant used the bed. The rubber or sorbo mattresses of the infants were treated by wiping with a dilute solution of "dettol," "roccal," or chlorhexidine. The pillows were at first disinfected with formalin, but later this treatment was abandoned and plastic covers were used for the pillows. Since May, 1955, hand cream has been supplied for the nursing staff and also for the mothers, after they had washed their hands. Chlorhexidine and roccal were incorporated in the hand cream, 50% of each; the two compounds seemed to be equally effective.

Results

Records were kept of 211 blood-agar plates exposed in the wards during periods of activity. No colonies of *Staphylococcus aureus* were observed. Numerous colonies of *Staphylococcus albus* were identified. On two occasions a few colonies of *Streptococcus haemolyticus* (Lancefield group A) were found on a plate. A total of 477 swabs (nasal 243, eyes 165, and umbilical 69) from infants were examined. *Staph. aureus* was isolated from 58.8% of nasal, 48.4% of eye, and 55% of umbilical swabs taken between the eighth and the tenth days of life. (Penicillin-resistant staphylococci were found in 75 to 90% of the earlier (pre-1954) series, and in 65 to 80% of the present series (1955-7).

Infection among 4,919 infants (1955-7) was 2.5% (respiratory infections 0.2%, minor skin lesions 1.3%, eye infections 0.18%).

A total of 309 swabs from mothers were examined (110 nasal, 124 throat, and 75 nipple). *Staph. aureus* was isolated from 23.6% of nasal, 6.5% of throat, and 47.9% of nipple swabs. (*Staph. aureus* was insensitive to penicillin in 75% positive swabs in 1955, and in 65% positive swabs in 1957.) From January, 1950, to December, 1953, among 4,830 patients (including 64 admitted after delivery) there were 5.3% puerperal pyrexia cases. In 1953 three cases of breast abscess occurred; there were none in 1955-7. (A few post-natal women—a week or two after discharge—developed a breast abscess.) A total of 310 swabs from nursing staff were examined (150 nasal, 111 throat, and 49 hand). *Staph. aureus* was found in 34% of nasal, 4.5% of throat swabs, and in one hand swab. Of these strains 90% were resistant to penicillin.

During the second four-year period, 22 midwives and nurses and 202 pupil midwives were employed. Infections occurred in 75 individuals (33.6%). Four-fifths were minor respiratory cases, mainly tonsillitis and influenza. Other cases included minor skin lesions, boils, and furuncle of the ear (3.5%), eye infections (styes) 1.8%, gastro-enteritis 0.27%, and one case of glandular fever. *Staph. aureus* was not isolated from exposed plates—that is, from air-borne settles—but the micrococcus was isolated from the nasal, eye, and umbilical swabs. Of 255 neonatal deaths, respiratory infection was found in 2.3%.

The methods evolved for the prevention of cross-infection show some success; but *Staph. aureus* implanted in the noses of infants did not seem to be unfavourably affected.

It is thought that *Staph. aureus* confined to the noses of infants may not be harmful unless some means of dissemination occurs.

I thank Miss Helen Rodway, consultant obstetrician, Thorpe Coombe Maternity Hospital, London, for collecting the data and for enlightened supervision of the fight against cross-infection; and Dr. H. Caplin, director of pathology, Forest Hospitals Group, for undertaking many of the swab examinations.

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Medical Memorandum

Acute Haemolytic Anaemia in a Case of Infantile Gastro-enteritis Treated with Oxytetracycline

Anaemia of mild or moderate degree following infantile gastro-enteritis is not uncommon, and is usually thought to be due to a toxic depression of blood formation, often in association with a nutritional deficiency.* It is not known whether haemolysis plays any significant part. By infantile gastro-enteritis we mean a specific disease due to a number of serologically distinct types of *Escherichia coli*: an acute severe haemolytic anaemia following this condition has not been seen before in this unit. The following case is reported because other workers may have had similar experience and may be able to shed further light on its aetiology.

CASE REPORT

A male infant aged 6 months was admitted to hospital on December 5, 1956, with a five-day history of diarrhoea with some vomiting. His temperature was 98° F. (36.7° C.), pulse 134, and respirations 32. He was an ill child, with moderate dehydration and sore buttocks, but otherwise clinical examination was negative. He had not had any previous illness and there was nothing relevant in the family history. Glucose saline (2.5% glucose in 0.3% sodium chloride) was given by mouth, and after two specimens of