nized amounts to criminal negligence." There is now ample evidence that sulphapyridine cures with dramatic rapidity, making unnecessary prolonged hospitalization, such procedures as external canthotomy, and constant or frequent local treatment. With the duration of the affection cut short, the dreaded corneal complications of ophthalmia neonatorum have now become almost a matter of historical interest. It is, however, still essential that infants with ophthalmia neonatorum should receive in-patient treatment, for the new therapy requires care as meticulous as was the nursing necessitated by the classical methods. If it was true that the management of a case of gonococcal ophthalmia by local therapy was one of the severest tests of nursing, it is also now true that the treatment of a case by present-day methods is a test of a practitioner's capacity to apply medical knowledge with efficiency and precision. It is possible that eventually a satisfactory local therapy with sulphonamides will be evolved, but the classical methods of local treatment with or without such adjuvants as shock therapy have no longer any place in the treatment of ophthalmia neonatorum, especially as the sulphonamides have proved satisfactory not only for gonococcal ophthalmia but also for the other forms of ophthalmia neonatorum.

Summary

An account is given of 273 cases of ophthalmia neonatorum treated with sulphapyridine, and of a control group of 46 cases treated by the classical methods of local therapy.

The results obtained by sulphapyridine justify the description of this method as a revolutionary advance.

Sulphapyridine has proved as effective in non-gonococcal ophthalmia as in the gonococcal variety.

The routine employed in the ophthalmia neonatorum unit of White Oak (L.C.C.) Hospital is described.

We are indebted to the Medical Officer of Health for the London County Council for permission to publish these findings, and to the Matron and Sister Condon of White Oak Hospital for their collaboration.

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K. L. Pickrell of the Department of Surgery, Johns Hopkins Hospital (*Johns Hopk. Hosp. Bull.*, 1941, **69**, 217), in a preliminary note records the results obtained in the treatment of 115 burnt patients with 3% sulphadiazine in 8% triethanolamine. The results have been so good that it has been decided to continue the use of this method in the treatment of all burns at the Johns Hopkins Hospital for the time being. A patient whose burns are severe enough to need treatment in hospital is placed at once on sterile sheets in the accident room and treatment for shock is immediately instituted. Cultures are taken from the burnt areas. While the surgeon is scrubbing up, the nurse sprays the burnt areas with the sulphadiazine mixture. The burnt areas are not washed or cleansed in any other way. Spraying is continued every hour on the first day, every two hours on the second day, every three hours on the third day, and every four hours on the fourth day. Pickrell points out that sulphadiazine can be safely used in and around the eyes with impunity. It can be detected in the blood within some hours after having been sprayed on the surface of the burn.

SULPHAPYRIDINE AS AN AID TO THE POST-OPERATIVE TREATMENT OF LARYNGEAL DIPHTHERIA ASSOCIATED WITH MEASLES

BY

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The association of diphtheria with measles is always a serious matter, and still more so if the disease invades the larynx, rendering operative treatment necessary for the relief of obstructive symptoms. My own experience in the past has been that most of these cases succumb to a fatal bronchopneumonia, but encouraging results in the treatment of measles and its complications with sulphapyridine (M & B 693) led me to try this form of therapy in the following four cases, all of which recovered. The occurrence of laryngeal diphtheria and measles is not common in the limited area served by this hospital; but the results in this small series of cases suggest that this drug has a sufficiently favourable prophylactic effect to warrant its trial in similar cases.

Notes on Four Successful Cases

Case I

A girl 2 years old was admitted on January 28, 1941, with a diagnosis of measles and bronchopneumonia. The rash was first noticed by her parents four days before admission, and the doctor was summoned because of their alarm at her "noisy and rapid breathing." Examination showed a well-nourished child. Her temperature was 102°, the pulse 150, and respirations 60. She had a croupy cough, hoarseness, and well-marked stridor. There was very slight recession, but no cyanosis or acute distress, and the trunk and face showed evidence of a fading morbilliform rash. The throat was congested but quite clean. There were coarse rales over both sides of the chest but no localized dullness. A diagnosis of measles, bronchopneumonia, and ? laryngeal diphtheria was made. As the child was restless she was given 2 drachms of paraldehyde in saline per rectum, 28,000 units of diphtheria antitoxin intramuscularly, and oxygen through a nasal tube. In addition she received 1 gramme of sulphapyridine orally, followed by 0.5 gramme every four hours. Two hours later her general condition was fairly good, but the stridor was more pronounced and she was still rather restless. Half a grain of luminal was prescribed and she was placed in a steam tent. Four hours later there was less stridor and her colour was still satisfactory. At 10 p.m. the same day the improvement had been maintained, and a further half-grain of luminal was all that was required to give her a good night. Next day she was very much better, sitting up in bed playing. There was still some stridor, and the signs in her chest remained much the same as on admission. The temperature had fallen to 99.4° and the pulse and respirations to 130 and 32 respectively.

On the 30th there was hardly any stridor, but slight cyanosis was present and she was rather drowsy. In view of this the sulphapyridine was reduced to 0.5 gramme six-hourly. The temperature was normal, but the pulse and respirations remained round about 130 and 30.

On the morning of the 31st—that is, three days after admission—her general condition was much worse. Recession and stridor had reappeared; she was still cyanosed, and the chest was full of coarse rales. Half a gramme of sulphapyridine was again given four-hourly. Her general condition grew steadily worse and she showed all the physical signs of progressing respiratory obstruction, so that at 2 p.m. a tracheotomy was performed. This gave her immediate relief, resulting in rapid improvement of her colour and general condition. Half a gramme of the drug was continued at four-hourly intervals until the tube was removed three days later, and shortly after this the physical signs in her chest cleared up, the wound healed rapidly, and she was discharged from hospital on March 7, five and a half weeks after admission.

Case II

A boy 5 years old was admitted on October 2, 1940, suffering from laryngeal diphtheria. He had been ill for six days at home, and had moderate dyspnoea with recession, a hoarse voice, marked stridor, and a croupy cough. The throat was congested, and old separating membrane was present on both tonsils. The cervical glands were enlarged and his general condition was very poor: temperature 99°, pulse 120, respirations 24. A late faucial and laryngeal diphtheria was diagnosed and 60,000 units of diphtheria antitoxin was given intramuscularly, the foot of his bed being raised on low blocks. Shortly after admission he had an attack of acute dyspnoea, followed by another an hour later. His general condition deteriorated rapidly, and marked recession, aphonia, and early cyanosis heralded the onset of acute respiratory obstruction. Tracheotomy was performed two hours after admission, and although his condition remained poor his distress was immediately relieved. An attempt was made to remove the tube in forty-eight hours, but without success, and further intervention was postponed until the following day, when this was successfully accomplished. On the 6th, four days after admission, his temperature rose to 101°, the wound became inflamed, and mild stridor reappeared. No obvious cause could be found for these symptoms, but it was thought they might be due to sepsis, and 0.75 gramme of sulphapyridine was administered four-hourly. The next day his temperature was still 101° and Koplik's spots were seen, followed in a few hours by an early morbilliform rash. On the 8th the rash was fully developed. On the 9th his temperature fell to normal and his general condition improved. Sulphapyridine was reduced to 0.5 gramme six-hourly and discontinued twenty-four hours later. His convalescence was interrupted by an acute otitis media with a purulent discharge from the left ear, which responded satisfactorily to further administration of sulphapyridine and local treatment. Later on he developed a blood-stained nasal discharge with excoriation of the nostrils and an impetiginous eruption on the face, which cleared up after a further 16,000 units of diphtheria antitoxin had been given after desensitization. He was discharged from hospital on December 16, 1940, eleven weeks after admission.

Case III

A girl aged 7 was admitted on July 29, 1940, suffering from laryngeal diphtheria. She had been attended by her doctor for an attack of measles, which started six days before admission. She had complained of a sore throat two days previously. When first examined she was in a distressed condition, with temperature 100°, pulse 120, and respirations 28. There was marked recession, pallor, and oft-recurring attacks of severe dyspnoea. Both tonsils were covered with membrane, which had begun to creep over the soft palate on the right side. The cervical glands were moderately enlarged. The trunk showed generalized staining consistent with a recent attack of measles. She was given 1 c.cm. of coramine intramuscularly and an immediate tracheotomy was performed. Her urgent dyspnoea was relieved at once, and after she had settled down 48,000 units of diphtheria antitoxin was given intramuscularly.

She passed a comfortable night and coughed up several shreds of membrane. Sulphapyridine, 0.75 gramme, was administered orally every four hours. During the day she showed signs of becoming "dry," but otherwise her condition was satisfactory.

At 10.40 on the morning of the 31st I was summoned to see her. She had developed a sudden acute dyspnoea and cyanosis, with general collapse. The tube was taken away, membrane forceps were inserted, and a cast of the trachea $2\frac{1}{2}$ inches long was removed. Coramine was given and the tube reinserted, and by midday her condition had considerably improved. Thereafter her immediate progress was satisfactory. The tube was removed on the evening of August 2 and the sulphapyridine discontinued three days later. A severe diphtheritic myocarditis delayed her discharge until October 7, ten weeks after admission.

Case IV

Another girl aged 7 was sent into the hospital on January 6, 1941, suffering from measles and laryngeal diphtheria. The rash was noticed three days before admission, and her appear-

ance was indicative of a recent attack, as she showed a well-marked fading morbilliform eruption. Her temperature was 98°, pulse 108, and respirations 36.

Examination revealed membrane all over the posterior pharyngeal wall, and well-marked stridor, recession, and aphonia were present. 60,000 units of diphtheria antitoxin was given intramuscularly, and 0.75 gramme of sulphapyridine administered orally every four hours. At 10 o'clock the same evening the obstructive symptoms became more urgent, recession was increased, and she became very distressed. Paraldehyde, 3 drachms in four and a half ounces of saline, was given rectally, and half an hour later tracheotomy was performed, relief being immediate. Her progress remained satisfactory, and the tube was removed on the 9th, three days after admission. The following day the sulphapyridine was reduced to 0.5 gramme six-hourly, being discontinued four days later. Her recovery was delayed by a diphtheritic myocarditis, and she was discharged on March 29, nearly twelve weeks after admission.

I have to thank Dr. T. Peirson, medical officer of health for the city of Plymouth, for permission to submit these case histories for publication.

A CASE OF CONGENITAL OSTEOPSATHYROSIS WITH THE GENEALOGICAL TREE OF THE FAMILY

BY

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A man aged 47 was admitted to hospital with biliary colic. He had deep blue sclerotics, was small in stature, and, unlike the usual sufferers from gall-stones, was very thin. On further investigation a family history of multiple fractures of the long bones was elicited, and in view of its completeness it was decided to place the case on record.

The Genealogical Table

Generations* 1st 2nd 3rd 4th	Age	Blue Sclerotics	Fractures	Site of Fracture
M		+	+	Femur twice at 62. Died of pneumonia
M		+	+	Forearm at 62. Dead
M	47	+	+	Several of all limbs before school age
M	26	+	+	Several of upper and lower limbs before 7
M	24			No fractures at all
M	23			" " " "
M	21			" " " "
M	44	+	+	Two before school age; also at 19 and 42
M	17	+	+	Femur twice at 10
M	12			No fractures
M	14			" "
M	16	+	+	Several fractures before 7
M	9			No fractures
M	45			" "
M	41			" "
M	43			" "
M	38	+	+	Leg 4 times before 6th year.
M				Humerus twice. Clavicle at 13th, humerus at 33rd year
M	3	+	+	Humerus in 3rd year
M		+	+	Died at 2 from pneumonia following fractured femur
M		+	+	History of several fractures in childhood and old age.
M	28	+	+	Dead
M	6	+	+	Had several fractures as a child, before 7th year
M	4	+	+	Not known
M	25	+	+	" Many before 7th year
M	22	+	+	Several before 7th year
M	16			No fractures
M	15			" "
M				No fractures. Dead.
M				" " "

* The letters in black type denote members affected.
S = stillborn.

† The present case.