

scarcely answer when spoken to, and would not take nourishment. She had diarrhoea, anorexia, and the breasts were empty. The temperature and lochia were normal. She was kept quiet and the baby was taken away; large doses of bromide of potassium and aromatic spirit of ammonia were given, after which several hours' rest were obtained and the symptoms quickly passed off. The breasts filled and the patient became quite well.

My object in recording these facts is to show that the shock of delivery must have been very severe for the patient. The text-books give little information on this point. Herman's "Difficult Labour" does not mention it. Galabin (p. 93) mentions that "the male head is more firmly ossified at birth than the female skull, is half an inch more in circumference; hence arises greater protraction of labour in the case of males, more frequent necessity for artificial aid, and greater mortality both to mothers and children." Cazeaux and Tarnier's "Theory and Practice of Obstetrics," vol. iii., p. 839, states: "To this cause, dystocia, our colleague and friend, Dr. Joulin, Adjunct Professor of the Faculty of Medicine at Paris, devoted a long chapter of his thesis for the Concours. According to him the Germans admit that trouble may be due to the size of the head alone, besides which they also call attention to a peculiarity of the ossification little known in France, which adds to the difficulty of the situation—viz., the development of Wormian bones in the fontanelles causing their solidification." "It is very hard to determine what ought to be done in cases of this kind; it is almost impossible to become aware of the size of the child whilst it is still within the womb, so that the practitioner who finds the progress of the case arrested in an apparently well-formed pelvis will very probably decide upon active interference before the true cause of the delay is detected and apply the forceps or cephalotribe according to the amount of difficulty which the size of the head shall present to its extraction" (Joulin). "The fontanelles at inferior angles of parietal bones close soon after birth. The posterior fontanelle closes in a few months, the anterior remaining open until the first or second year. Sometimes this fontanelle remains open beyond two years, and occasionally persists throughout life" (Gray).

I shall be glad to know if this condition is often met with and the best means of its diagnosis, as the guides to the fontanelles—viz., the sutures—were in this case closed.

Finsbury Park-road, N.

A NOTE ON THE INFLUENCE OF ANTITOXIC SERUM ON THE TUBERCULO-OPSONIC INDEX.

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WHILE preparing a paper on the opsonic index, a paper which was read jointly with Dr. E. E. Glynn on May 3rd before the Liverpool Medical Institution and which will be published in full in the summer number of the *Liverpool Medico-Chirurgical Journal*, I made a number of estimations for the purpose of ascertaining for myself the fact generally accepted that the tuberculo-opsonic index is practically the same in all non-tuberculous individuals. On one particular day I determined the index of seven persons, free from all suspicion of tubercle, four medical men, two nurses, and a young man, D., in my ward who was recovering from an attack of neuritis, the result of diphtheria, for which he had been treated with antitoxic serum about three months before. The index of the first six worked out well within the accepted normal limits of variation but to my surprise the index of the patient was only half the average of the others. The following are the exact figures: Dr. B., 1.14; Mr. S., 1.05; Mr. C., 0.97; Mr. H., 0.96; Nurse A., 0.95; and Nurse B., 0.92; average 1.00. Patient D., 0.47. The other counts agreed so closely that I felt confident I had made no mistake in carrying out the estimations and I was inclined to suspect that the patient in question had some local tuberculous infection which I had not been able to discover. My late house physician, Mr. C. H. Smith, however, suggested that the low index might be a consequence of the inoculation with antidiphtheritic serum three months

before. One of his colleagues, Mr. W. Yorke, had noticed a marked depression of the tuberculo-opsonic index following the administration of a prophylactic dose of antitetanic serum given to a healthy man who had reason to fear he had exposed himself to the risk of inoculation with tetanus. To test the correctness of this explanation I took the tuberculo-opsonic index of eight other individuals who had been treated with antidiphtheritic serum. In three of the cases a second estimation was made after an interval. The following table shows the opsonic index in each case and the time which had elapsed between administration of the antidiphtheritic serum and the estimation of the index.

No. of case.	Interval since the antidiphtheritic serum was administered.	Index.
1	2 days.	1.30
2	5 "	0.64
	12 "	1.02
	25 "	0.35
3	27 "	0.89
	41 "	0.72
4	25 "	0.64
5	26 "	0.72
6	26 "	0.62
7	27 "	0.77
8	28 "	0.69
9	3 months.	0.47
Average	...	0.73

It thus appears that in all the nine cases examined the tuberculo-opsonic index was found below the normal at some period subsequent to inoculation with antidiphtheritic serum. The depression seems to have increased for some time and in Case 9 to have persisted for months. Cases 1 and 2 suggest that the immediate effect of the inoculation is to raise the tuberculo-opsonic index but the data are too scanty to enable us to generalise on this point. It is obvious that it must be of the utmost importance to bear in mind the possibility of some such cause as was present in the foregoing cases before giving an opinion on the significance of a low opsonic index. As to the nature of the influence of the antitoxic sera, antitetanic as well as antidiphtheritic, on the opsonic index it is premature to offer any positive opinion. It is not unreasonable, however, to assume that it is due to some property inherent in the blood of the horse and has nothing to do with the specific antitoxins.

I have to thank my present house physician, Mr. G. L. Cox, for his assistance in carrying out the estimations.

Liverpool.

EXTENSIVE RUPTURE OF THE LIVER WITHOUT EXTERNAL INJURY.

By F. SEYMOUR LLOYD, M.D. LOND.

AT 9.30 P.M. on May 1st I was called to see a brewer's drayman who had just been brought in by his companions and found him to be dead. As no one witnessed the accident it is impossible to say exactly how it occurred, but it seems probable that as the man was in the act of mounting to the box his horses started off suddenly and trying to pass a dray standing just in front of them squeezed his body between the projecting hoods of the two vans. The first intimation that anything was wrong was received by the driver of the first van who, surprised to find the second van starting before his own, looked down and saw it passing with the deceased hanging by the hands to the stays just below the hood. Immediately the dray forged in front, however, he let go his hold, regained his feet, and darted on to the sidewalk where he leaned against a parapet with his head on his left arm and his right hand compressing his abdomen. He appeared to be in great pain and made as if to vomit, but did not do so; after a little while he tried to pull himself together and said, "All right, mate, I'll drive