Age and Sex.

	Under 1.	1-10.	10-20.	20-30.	30-40.	40-50.	50-60.	60-70.	70-.
Males ...	2	2	4	1	2	16	13	12	10
Females ...	5	1	2	2	9	6	15	8	3
Total ...	7	3	6	3	11	22	28	20	13

Total males, 62; total females, 51.

Totally Unexpected Deaths.

Cardiac ...	6
Pneumonia ...	3
Pulmonary embolism ...	2
Late anaesthetic ...	1
Ileus ...	1
Strangulation after hernia operation ...	1
Meningitis ...	2
Renal ...	1
Sepsis ...	1

Total ... 18

We are greatly indebted to our surgical colleagues, past and present, for their kind permission to use their notes of cases; also to Dr. Dorothy Staley for clerical assistance.

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NASAL INFECTION IN CHILDREN.

AN ANALYSIS OF 85 CASES TREATED BY AUTOGENOUS VACCINE.

BY

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In response to the suggestion of a medical colleague specially interested in diseases of children, I turned up the records of all the children (85) who had been brought to consult me between 1915 and 1925, whose illnesses I attributed to nasal infections, and for whom I had prepared autogenous vaccines.

I then wrote to each child's medical attendant and asked: What was the result of the vaccine treatment? and Did the administration of the vaccine upset the child?

I received answers from all. In eighty-three cases the inoculations caused no inconvenience and the full course was administered; in one case the reactions were so severe that the vaccine was discontinued, and in one case the vaccine was stopped because the child got whooping-cough. The therapeutic effect of the treatment appears later, and is so satisfactory that some analysis of the cases cannot fail to be of some scientific and clinical interest.

The average age of the children was 8 years. The following table shows the complaint for which I was consulted, and the result as reported recently by the medical attendant.

Complaints.	Cured.	Much Improved.	Little or no Improvement.
Asthma ...	1	1	0
Bronchitis and asthma ...	5	7	0
Chronic bronchitis ...	11	2	2
Chronic bronchitis and nasal catarrh ...	12	6	1
Chronic nasal catarrh ...	17	11	2
Recurrent pyrexial attacks ...	3	0	0
Recurrent pneumonia ...	2	0	0
Total ...	51	27	5

Naturally every child was brought to me by the father or mother, whose anxiety centred either on the poorness of the child's general health, the fear that "consumption" would

develop, or the inability of the child to attend school. These children for the most part had had prolonged medical treatment, had failed to benefit from a change at the sea, and the tonsils and adenoids had been removed.

When the vaccine was begun all other treatment ceased. In every case the vaccine was given every week for twelve or fourteen weeks.

The bacteriological findings were as follows:

Pneumococcus ...	73 cases
B. influenzae ...	31 "
Friedländer's bacillus ...	17 "
Staphylococcus aureus ...	11 "
M. catarrhalis ...	9 "
Streptococcus ...	6 "
Streptococcus pyogenes ...	2 "
Bordet's bacillus ...	1 case.

From these figures it will be seen that although the pneumococcus was present in nearly all cases, in most instances one of the other germs was present also. No notice was taken and no record kept of diphtheroid bacilli, hard colonies of chromogenic diplococci, or any other germs which were regarded as unimportant.

The vaccines were usually made from primary cultures or first subcultures, sterilized by heat. Their strength varied with the ages of the children. In a child of 8 the initial dose was about five million and the final dose fifty million of each germ employed.

The cultures were made from nasal swabs on plates of blood agar and peptinized blood influenza medium. *Never more than five minutes was allowed to elapse between the taking of the swabs and the inoculation of the media.*

In some cases sputum was available, but added nothing to the bacteriological findings from the nasal cultures. The cultures were usually so profuse as to leave no doubt as to the reality of the infection.

My own belief is that the infection in such cases lies in one or more of the nasal sinuses, and the results confirm the opinion, which I have held for many years and expressed in the JOURNAL on more than one occasion in the past, that not only in nasal catarrh, but also in chronic bronchitis, certain types of asthma, and some cases of unexplained pyrexia, the cause must be sought in the nasal passages. That one should have been so fortunate as to get satisfactory results in over 90 per cent. of cases which had defied other forms of treatment is the excuse offered for publishing these notes.

THE DIAGNOSIS OF TUBAL ABORTION AND RUPTURE.

BY

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TEACHERS of gynaecology and obstetrics are compelled to be somewhat dogmatic when lecturing to undergraduates; and even by the bedside they have to try to impress the student's mind with a fairly definite picture of the various types of pelvic lesions with which he is expected to deal in after-life. I think most young graduates feel that whatever else they do not know, they are not going to fail to diagnose the classical case of tubal abortion or rupture. The history that one or two regular menstrual periods have been missed; the sudden onset of pain in either iliac region, with extreme tenderness and rigidity of the abdominal muscles; the slight loss per vaginam; the rapid pulse; the pallor of the patient; and the discovery of a fluctuant mass in the posterior fornix—when all these are present there is no difficulty in coming to a quick and correct diagnosis.

This picture, however, is seldom seen, and many cases have come under my care where the diagnosis has not been made or has been made very late. When the case has been diagnosed early the prognosis is very good, but becomes rapidly worse the longer the patient continues to bleed—for two reasons: first, the drainage of blood, apart from the primary risk of death by syncope, exhausts the haemopoietic tissues, and postpones the re-establishment of an efficient blood supply; secondly, the continued

presence of blood in the peritoneal cavity increases the chances of infection from the bowel, contributed to by the invariable constipation, or, more rarely, from latent infection of the adnexa. The classical picture may fail us in the following respects:

The Missed Period.—(a) It is frequently observed that the first two or three months of intrauterine pregnancy are associated with menstrual loss more or less normal. This may also be the case when the pregnancy is extra-uterine, and hence the history of missed periods may be entirely absent. (b) When the periods have been perfectly regular previously, the occurrence of intraperitoneal haemorrhage before the onset of the first menses is very rare, but the abortion or rupture may occur synchronously with the expected menses, and the condition be diagnosed as dysmenorrhoea. (c) The patient may be lactating, with the associated amenorrhoea, and she may be very emphatic as to the impossibility of conception having taken place. The first menstrual period after lactation and amenorrhoea is frequently copious and of long duration, and on this account the extrauterine disturbance may be overlooked. (d) Another group is common, in which an apparently normal period has continued for several weeks with occasional attacks of abdominal pain and faintness of varying intensity. If a period or two have been missed the diagnosis is threatened abortion, until a severe paroxysm of pain leads to more careful examination, and the pelvis is found full of blood clot, with recent blood in the abdomen.

Pain.—The first attack of pain is nearly always typical. The intensity varies from the acute disabling spasm to very slight pain, but it is always definite, always sudden, and nearly always associated with a varying degree of faintness. It passes away to a great extent in a short time (an hour or two), if the patient is at rest and no further bleeding takes place. These are points of difference from all but the rarest cases of appendicitis, with which the condition is commonly confused, owing to the associated constipation and one or two attacks of vomiting. Blood is said to be highly irritating to the peritoneum, and this is so when it is first effused, but the irritation passes off, and cases are not rare in which severe attacks of pain have occurred at intervals of a week or more, the patient going about her usual avocation, and in which, at operation, very old organizing blood clot has been found in the pelvis. The site of the pain varies. Usually in either iliac region, it may originally be umbilical or even epigastric, and in three of my cases has extended later to the left shoulder, presumably owing to the blood getting up to the subdiaphragmatic region and irritating the phrenic nerve. The point of maximum tenderness is always pelvic.

Decidual Cast.—The slight loss from the vagina is so commonly mistaken for a normal period as to call for only cursory mention, and the passing of a uterine decidual cast, in about a third of the cases, is not often noted by the patient or inquired into by the doctor, but when found it gives a positive diagnosis. The loss is usually dark brown.

General Signs.

Pulse.—The rapidity of the pulse rate varies with the rapidity of the bleeding. I have seen a case with abdomen full of blood, with a pulse rate of only 90—she had been bleeding intermittently for three weeks. Severe bleeding may also cause much surgical shock, in which case the pulse rate occasionally is low, even down to 80.

Temperature.—The usually normal or subnormal temperature does not assist very much in diagnosis. Many abdominal emergencies show similar conditions, and a late case of blood in the peritoneum may have a temperature as high as 100°.

Pallor is almost always present in both early and late cases, and this sign is not given the important place it should have in the textbooks.

Local Signs.

Rigidity and Tenderness.—Rigidity and extreme tenderness of the abdomen are by no means invariably present. In more than half of my cases the abdomen was comparatively flaccid and only slightly tender, with the

peritoneal cavity full of blood. These cases include early and late ones. As in the case of pain, the irritation of the effused blood apparently passes quickly, unlike that caused by acute inflammation, where the rigidity tends to increase. In my experience the absence of this sign, more than that of any other, has given rise to mistakes by general surgeons.

Fluctuation.—The fluctuant mass in the pelvis is only found in the textbooks or in late cases. Fluctuation implies some tension, and no tension is present until the irritation of the blood has led to some peritoneal adhesions of loops of bowel, to form a roof to the pelvis (the omentum does not take much part in this, as in inflammatory lesions). These adhesions are formed only after several days, and the only sign in the pelvis is tenderness, usually extreme, and usually in all the fornices—not particularly the posterior. This helps to differentiate from suppurative conditions, where the tenderness is nearly always posterior. The fluctuant mass is an intermediate stage and not often found, the common sign being an irregular doughy mass in cases of a week's standing or longer.

It seems clear, then, that the diagnosis of tubal abortion or rupture is not the easy matter we are led to expect, and in many cases can be arrived at only after detailed examination of the history and careful investigation of the physical signs.

I now put most faith in the following: The history of sudden onset, almost always while the patient is in motion—that is, going about her work; the feeling of faintness; the missed menses, if any; the pallor of the patient, and the presence of evenly distributed tenderness in the fornices.

Memoranda: MEDICAL, SURGICAL, OBSTETRICAL.

POISONING BY OIL OF EUCALYPTUS.

As I fail to find any record in any textbook of toxic symptoms produced by eucalyptus the following case may be of interest.

On April 27th I was called to see Mr. T., and was informed by his wife that he had taken an overdose of eucalyptus oil.

The patient was cyanosed, the respirations were very shallow, the rate being about 12 a minute. He was in a condition of stupor, and could be roused but refused to speak. The pulse rate was 50 and very feeble. The pupils were contracted to pin-point and did not react to light. The reflexes were very sluggish and there was considerable loss of muscular tone. The body was cold and clammy.

Strychnine 1/60 grain was given hypodermically and 2 drachms of mustard in water by the mouth. He vomited soon after, and the vomitus smelt strongly of the essential oil. A stomach tube was passed and the stomach washed out with two quarts of water. The patient's condition improved gradually. On regaining his normal mental condition he stated that after taking about 4 drachms of oil of eucalyptus he at once felt a pain in his stomach. A feeling of nausea soon followed, but he did not vomit. His limbs began to get weak, and this was followed by giddiness. Cold sweats and rigors were also felt, as well as severe headache. He gradually became more exhausted and then lost all recollection.

Pentre, Rhondda.

PHILLIP GIBBIN.

VOLVULUS NEONATORUM.

I was extremely interested in the article by Mr. Norman M. Dott in the *BRITISH MEDICAL JOURNAL* of February 5th, 1927 (p. 230), and for statistical purposes should like to record a case of volvulus that occurred in my practice.

A full-term male child, weighing 7½ lb. was born on March 14th, 1927. No meconium was passed for some four hours after birth, when about two teaspoonfuls were expelled. Thirty hours after birth the child refused the breast and appeared to be in pain. The abdomen was slightly distended, but the general appearance was good. An enema (1 drachm of glycerin to an ounce of water) brought away about a dessertspoonful of meconium. Six hours later there had been no further passage of intestinal contents, and the abdomen was more distended. Rectal examination failed to locate any abnormality. The next morning, or fifty-two hours after birth, as obstruction was evidently complete, a small amount of mucus only being passed after rectal examination, operation was decided upon. The baby was extremely ill, and the father was given the option of refusing the operation, as the chance of success seemed so remote.