

TABLE XIII.—Summary of the Pertinent Results of the Statistical Analysis of the ABO Data (Iowa and Combined)

Source	No. Patients	Information (w or Sw)	Estimated (y) or Mean Weighted Estimator (Swy Sw) with Standard Error	Relative Incidence (Exponential of y or Swy Sw)	Main Effect square wy^2 or $(Swy)^2$ (Sw)
Secretor against non-secretor:					
Iowa ...	376	54.43	0.1519 ± 0.1355	1.16	1.26
Table XII ..	1,192	151.80	0.2218 ± 0.0812	1.25	7.47**
Group A against Group O:					
Iowa ...	661	162.03	0.1937 ± 0.0786	1.21	6.08**
Table XI ..	2,475	577.00	0.1358 ± 0.0416	1.15	10.65***
Group B against Group O:					
Iowa ...	383	59.34	0.1496 ± 0.1297	1.16	1.33
Table XI ..	1,625	256.38	0.1655 ± 0.0627	1.18	6.97**
Group AB against Group O:					
Iowa ...	343	30.83	0.3755 ± 0.1801	1.46	4.35*
Table XI ..	1,409	114.12	0.2670 ± 0.0936	1.31	8.13**

* P<0.05. ** P<0.01. *** P<0.001.

groups are reported. Statistically significant evidence has been found in 771 rheumatic-fever patients that the liability to this disease is increased in persons who are of non-O ABO blood group, are of rhesus genotype R_2r and $(r'r'')r$, MN group N, and are non-secretors of ABO (H) blood-group substances. The data have been combined and statistically analysed with those reported by other investigators.

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The Patients' General Committee in Moorhaven Hospital, Ivybridge, Devon, has now been in force for about three years. There are 16 members—one representative from each ward. The officers of the committee are patients and no staff are present at the meetings unless invited. The committee meets each week and can discuss any subject concerned with the hospital. Members are free to criticize, and the chairman or secretary of the committee can approach members of the hospital administrative staff on committee matters. It is the custom always to invite a guest to its meetings. The guest is usually a member of the hospital staff but has included members of the Hospital League of Friends, the chairman of the hospital management committee, and the Lord Mayor of Plymouth. One of the most recent matters discussed by the committee was how to help in an economy drive which the hospital is at present having to undertake. The committee has been very helpful in many ways, such as putting forward proposals to improve the public bus service to the hospital.

A NOTABLE SOURCE OF ERROR IN THE DIAGNOSIS OF APPENDICITIS

BY

H. E. HARDING, D.M.

Director, Salisbury Area Pathological Service

Probably no surgeon wishes to remove a normal appendix, but the number of such appendicectomies amounts to perhaps a quarter or more of the total removed. Barnes, Behringer, Wheelock, and Wilkins (1962) found that 25.3% of 7,810 appendices removed at the Massachusetts General Hospital between 1937 and 1955 were normal. From an analysis of figures supplied by the General Register Office giving the number of patients discharged from hospitals with a diagnosis of appendicitis in 1956 and 1957, Lee (1961) showed that twice as many young women aged 17 years were thus diagnosed than might be expected. He noted that although these cases had been discharged with a diagnosis of "appendicitis" there was no information about the histological findings, and he believed that the extra cases in young women were probably not due to inflammation of the vermiform appendix as commonly understood.

Appendicectomy in these circumstances may be not much more than a minor operation, but it is not entirely without risk to the patient (Barnes *et al.* record four deaths), and is wasteful of hospital beds and of the time of surgical teams and nurses as well as of that of the patient. Anything that would help to reduce the number of these unnecessary operations would be welcomed by patients, surgeons, and administrators. It is for this reason that this note is intended to draw attention to a group of patients in whom a mistaken diagnosis of appendicitis is made much more frequently than in the general population. It is not my belief that this is unknown to surgeons, but they may well be unaware of the magnitude of the problem.

Results of Investigation

Because of an impression that all the normal appendices I saw came from young women, I started in 1955 to pay particular attention to every appendix received from the operating-theatres, and made an effort to obtain all of them for a period of seven years. Not quite all of those removed were in fact received, but there is no reason to believe that there was any selection by age or by sex. Every appendix was examined carefully macroscopically, and at least two blocks, one from near the tip and one from the middle, were taken for microscopical examination. Only those appendices that showed no abnormality of any kind both macroscopically and histologically were labelled as normal. Of 1,300 appendices, 515 (39.6%) fell into this category.

Results in Age-groups

Age	Males			Females		
	Normal	Abnormal	% Normal	Normal	Abnormal	% Normal
1-10	41	68	37.6	39	57	40.6
11-20	41	126	24.6	148	91	62.0
21-30	29	50	36.5	70	60	53.8
31-40	23	54	29.9	43	49	46.7
41-50	12	37	24.5	26	55	32.1
51-60	14	39	26.4	13	28	31.7
60+	10	33	23.3	6	38	13.6
All ages	170	497	29.0	345	378	47.7

Recording the results by age-groups for each sex (see Table) showed a higher proportion of normals for females, and this is most marked for the age-group of 11 to 20 years. In this last group almost two-thirds of the appendices removed were judged to be normal, whereas only a quarter of those from males of the same age-group were so judged.

In most, if not all, of these patients a wrong diagnosis of appendicitis had been made. Such errors occur at all ages and in both sexes, but they are much commoner in young females. In this last group the symptoms that are mistaken for those of appendicitis are not uncommonly derived from the ovary—for example, they are sometimes related to rupture of a follicle. In many cases I believe that they have a large psychological element—leaving the smoother life of school to start work, having a job that is not liked, quarrelling with a

boy friend, and other emotional upsets commoner at this age than at others. It is, however, outside my province to determine the reasons for these mistakes in diagnosis: I wish to draw attention to the frequency of error in this group so that clinicians may be especially wary when making a diagnosis of acute appendicitis in young females.

Summary

A mistaken diagnosis of acute appendicitis is made much more often in females aged 11 to 20 years than in any other age-group. Figures are given to show that as many as two out of three appendices removed from this group may be quite normal.

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TWO CASES OF THROMBOEMBOLIC DISEASE ASSOCIATED WITH ORAL CONTRACEPTIVES

BY

N. McINTYRE, M.B., B.S., B.Sc.

M. J. PHILLIPS, M.B., Ch.B., D.C.P.

AND

J. C. VOIGT, B.M., B.Ch., D.Obst.R.C.O.G.

Flight Lieutenants, Royal Air Force Hospital, Steamer Point, Aden

The annotation in the *British Medical Journal* of August 4 (p. 315) on the possible dangers of oral contraceptives has prompted us to submit without delay these two case reports of thrombotic disease associated with the taking of tablets containing norethynodrel. For climatic reasons many women wish to avoid pregnancy in the tropics, and since "conovid" can be bought without restriction from local chemists' shops it is likely that many women are availing themselves of the advantages of oral contraception. The second patient took "enavid" as treatment for menstrual disorder, and, in common with the cases mentioned in your annotation, she has had previous thrombotic disease following pregnancy. The first patient, however, has no previous history of thromboembolic disease.

Case 1

A 28-year-old married woman with two children was admitted to R.A.F. Hospital, Aden, on August 6, 1962. For two years she had suffered from attacks of indigestion lasting three days to three weeks. Each attack was associated with epigastric discomfort, an ache posteriorly over the right lower ribs, a choking sensation, and vomiting of a clear fluid. Appetite at these times was poor, but originally food seemed to relieve the discomfort. For some years she had taken large doses of purgatives, making her stool watery. After arrival in Aden six months ago her abdominal symptoms were exacerbated and she was admitted to hospital on June 6 for investigation. Physical examination revealed no abnormality. Her haemoglobin was 12 g./100 ml.; E.S.R. (Westergren) was 6 mm./hr.; W.B.C. was 6,000/c.mm. with normal differential. Chest x-ray and urine examinations were normal. No faecal occult blood was found. Frac-

tional test meal showed a high acid curve. She was discharged on June 18 and a barium-meal examination done as an out-patient on July 6 was normal. She was treated with antacids and her symptoms improved.

On August 3 the gradual onset of a pleuritic pain occurred over the lower part of the left lung anteriorly, with haemoptysis of considerable amounts of dark-red blood with accompanying clear sputum. Chest x-ray examination showed no change from the normal picture of June 8. Pleurisy and haemoptysis persisted until her admission on August 6, with associated breathlessness due to pain. She had no other symptoms on systemic review. Her weight had been steady and appetite good. Periods had been regular with a 28-day cycle and lasting seven days. She was a premature baby, and had rheumatic fever as a child. She has two children, aged 8 and 4½; both pregnancies were normal, with no complications and no thrombotic phenomena. Her mother has angina and her father has "ulcers." There was no other relevant family history. She smokes 15 cigarettes a day but drinks very little alcohol.

On admission she looked well but tired, and her temperature was 99.6° F. (37.6° C.). There was no anaemia, cyanosis, dyspnoea, dehydration, jaundice, or lymphadenopathy. Hess's test was negative, and there was no evidence of thrombosis of any limb vein. Rectal examination revealed no pelvic tenderness or cause for thrombosis. Pulse was regular at 100/min. and blood-pressure 135/85. Her jugular pressure was not raised and there was no oedema. Her heart was not enlarged, and the cardiac impulse was normal. The pulmonary second sound was not accentuated, and there were no murmurs before or after exercise. The trachea was central, and, apart from a transient rub at the left base and painful restriction of left chest movement, there were no unusual physical signs. The abdomen was normal, and neurological examination revealed no abnormality.

Her haemoglobin was 12.3 g./100 ml., E.S.R. 45 mm./hr., and W.B.C. 7,800 (P. 66%, L. 21%, M. 6%, E. 7%). Chest x-ray examination on admission showed some coarse horizontal streaking in the right costophrenic angle and possibly some linear streaking near the left costophrenic angle. Sputum was heavily blood-stained, but there were no acid-alcohol fast bacilli or pus cells on direct examination and no growth on culture. Urine was normal. Heat test was negative. No L.E. cells were found. Other investigations revealed serum proteins 6.8 g./100 ml. with A:G ratio 1.8:1. Blood group AB Rh-negative, clotting-time 8 min. 20 sec. (Lee and White), bleeding-time 3 min. 25 sec. (Duke), and prothrombin time normal. Serum glutamic-oxaloacetic transaminase was 56 Sigma-Frankel units/ml. on August 14. Other liver-function tests were normal.

The most likely diagnoses appeared to be pulmonary infarction, tuberculosis, bronchial adenoma, or an atypical