

# A SURVEY ON APPENDICITIS

From the Research Committee of the Yorkshire Faculty

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This faculty research project was planned as a group investigation into the epidemiology of acute appendicitis.

A *pro forma* was prepared for recording details of all emergency appendicectomies; patients thought to have appendicitis but not having an operation were excluded. All the 218 members and associates of the faculty were circularized on 1 April 1958. Eighty-three replied and 69 agreed to join in the survey.

The survey commenced on 1 May 1958, and lasted one year, ending on 30 April 1959. During the next six months, 52 completed returns were obtained, but 17 practitioners, for various reasons, failed to finish the course (a wastage of 25 per cent). One participating doctor himself had appendicectomy, and is therefore included both as doctor and patient.

In addition to the above Dr Rutter and his colleagues collected a most useful series of 34 appendicectomies performed by the four surgeons of the Whitby Hospital, covering the work of 12 doctors with an estimated practice population of 20,000.

## Results.

*The overall picture* (including Whitby series):

Total number of appendicectomies—296

Total numbers of patients in the survey—195,674

Appendicectomies per 1,000 patients—1.5

*Incidence during the year.* Figures 1 and 2 show variations with “peaks” in June, September, January and April (the end of the survey), with particularly low incidence in August. It is doubtful whether any significance attaches to this. An attempt to break down the seasonal incidence into geographical areas shows wide variations, but owing to small numbers in any area graphs are not worth-while.

*Age and sex incidence* (figures 3 and 4). Males—141: females—155. (No significant difference). Figure 3 shows the highest incidence

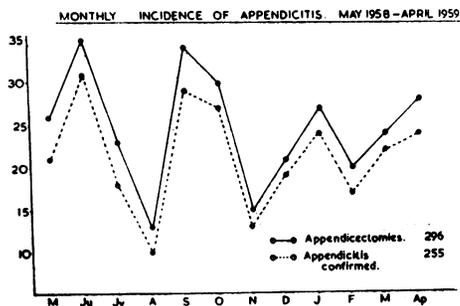


Figure 1

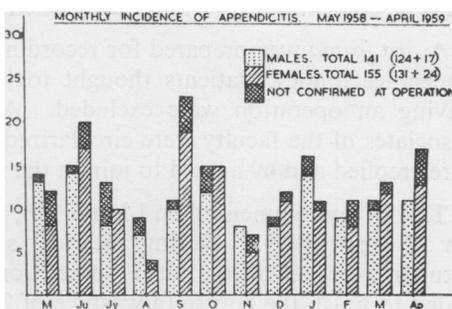


Figure 2

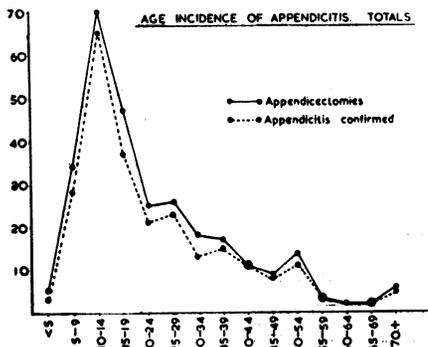
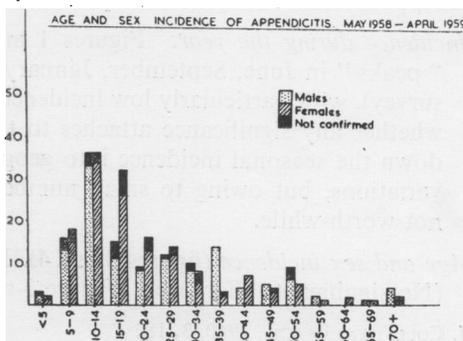


Figure 3

Figure 4



in the 10—14 age group, 156 cases (54 per cent of total) were below the age of 20. Appendicitis is predominantly a disease of children and young people, and is rare above 55, but the oldest patient in the series was a man of 79; the youngest was 6 months old. Sex incidence was equal before puberty, but females were twice as frequent as males in the age group, 15—24 years (48 females, to 24 males).

*Whether appendicitis confirmed; 255 answered 'Yes'.*

Appendicitis was confirmed in 86 per cent of operations. There was no sex difference.

*Whether mesenteric adenitis; Yes—40; no—162.* Mesenteric adenitis was present in 20 per cent of cases where a definite answer was given. Half the cases occurred in children under 15. In 10 patients with mesenteric adenitis, appendicitis was not confirmed (half of these were under 15).

*Diarrhoea in previous 14 days; Yes—40; no 228.*

Diarrhoea reported in 15 per cent of answers.

*Throat infection in previous 14 days; Yes—34; no—233.*

Throat infection was noted in just below 13 per cent of answers. No cases of mesenteric adenitis without appendicitis was associated with throat infection.

*Other infection in previous 28 days; Yes—29; no—235.*

Other infection was noted in 11 per cent of answers.

These were: respiratory infections, 18 (including 'flu, 4); septic conditions, 3; dysentery, 1; miscellaneous, 3; not specified, 4.

*Other appendicectomies in family:* This question was included but is too vague and the results are of little value. In case CH4 (Barnoldswick) appendicectomy had been performed in 4 siblings, and a Whitby doctor reported a father and daughter both having appendicectomy during the year.

### Analysis of Individual Returns

*Rate of appendicectomies.* Appendicitis is not very common and most family doctors can expect to see only 3 or 4 cases per year. Five had no cases during the twelve months. In the others the appendicectomy rate per thousand patients was calculated. Seven had more than double the average rate of 1.5. SA. of Keighley had 5.6 per 1,000 (20 cases) closely followed by BG. of Harrogate with 5.5. TB. of Normanton reported 23 operations.

*Sequence of cases.* (Whitby series is excluded). Grouping or 'proximity' of cases occurring not more than 28 days apart was looked for.

Returns of less than four cases were excluded from this search.

Five practices with a total of 8,980 patients returned no cases, five only one case each, three two cases each (in two of these there was a proximity of the cases), and eight returned three cases each (five of these show two cases occurring within one month).

Thirty-one practices returned more than three cases each, and 29 reported cases occurring within a month of each other. The total patients with appendicitis in the 31 practices was 227 and proximity in time appeared to involve 163 cases (72 per cent).

These 163 cases divide into: 32 pairs; 12 trios; 5 groups of 4; 3 of 6; 1 of 7; and 2 of 9 cases. (These groups are those of the individual doctors making the return).

The larger groups are, of course, to be seen only in the bigger returns, but these bigger returns do not show as might be expected a more even spread through the year, as compared with smaller returns.

Although proximity of one month has been mentioned, cases were reported by many practitioners as occurring much more closely together.

Examination of returns supports the impression that appendicitis occurs in "runs".

*Examples* are more convincing than the above statistics:—

- BG. (Harrogate)—11 cases. *Nil* between 1 May and 17 Sept.: 2—17/25 Sept.: 1—30 Oct.: 7—21 Jan.: /25 March: 1—25 April.
- SA. (Keighley)—20 cases. 1—4 May. 4—21 June/10 July 3—1/13 Nov.: 9—12 Dec.: /12 Jan.: 1—3 March. 2—20/22 April.
- TB. (Normanton)—23 cases. 6—7 May/17 June. 6—8 /23 July. 3—20 Sept./6 Oct.: 4—1/19 Dec.: 1—14 Jan.: 2—11/16 Feb.: 1—25 March
- MC. (Hedon)—13 cases. 9—9 May/23 July. 1—7 Oct.: 2—28/30 Jan.: 1—13 March.
- RB. (Bradford)—8 cases. 1—7 July. 3—10 Sept./13 Oct.: 2—6/24 Jan.: 2—14/17 April.

Many other examples could be given.

### Conclusion

Although only limited conclusions can be drawn from this survey it is considered that the method of investigation is worth-while and that a more extensive survey over a long period (say, five years) would be valuable.

The research subcommittee is grateful for the co-operation of all those who took part in the survey.

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