PITYRIASIS ROSEA 1964/65*

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THE Medical Research Council's investigation into pityriasis rosea in 1959 has already been published (*Proc. roy. Soc. Med.*, **55**, 556). This second investigation, based on a very simple questionnaire, has produced some additional information, but has not altogether solved the question put, namely "What is the cause of this disease?"

Much interest was shown. In 1964, 180 observers notified 531 cases, 260 male, 271 female; in 1965, 161 observers notified 514 cases, 243 male, 271 female—110 observers reporting in both years.

Distribution is probably world wide. Reports have come in from Australia (Campsie, N.S.W.), from New Zealand (Wellington), from Rhodesia (Bulawayo), from Scotland, Wales and Northern Ireland, and from every English county except Bedfordshire, Cornwall, Dorset, Monmouthshire, Northamptonshire, Rutland and Worcestershire.

Seasonal notification (figure 1) follows closely the pattern apparently shown in 1959—a high incidence in January, February and March, a steady decline to the summer months of July, August and September, a sharp rise in October and November, and a considerable fall in December. If notifications from the northern and southern hemispheres are separated, there is some suggestion that the seasonal incidence is reversed; but the numbers from the southern hemisphere, 23 in 1964 and 12 in 1965, are very small.

As to the interval between onset and diagnosis, the resemblance between 1964 and 1965 is quite remarkable. A fair proportion of cases are reported in the first three days; then comes a very high peak 'one week ago', followed by similar but lesser peaks at 'two weeks' and 'three weeks'. There is even, in both years, an appreciable peak at 'ten days'. In 73 notifications, seven per cent of the total of 1,045, information was too vague to be of use. It is not possible, therefore, to make a firm estimate of the interval between

*A shortened version of a report to M.R.C.

onset and diagnosis, and any such estimate would make no allowance for the observation, by patient or doctor, of the presence or absence of a herald patch, which in 1959 was noted in about three cases out of four.

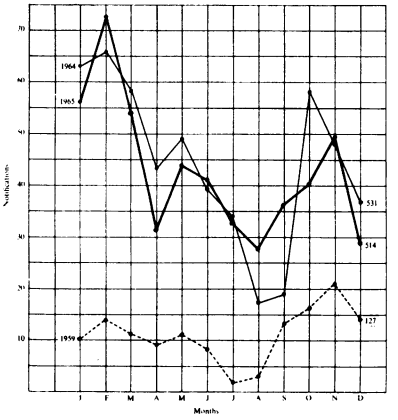

Figure 1
Seasonal notification, uncorrected

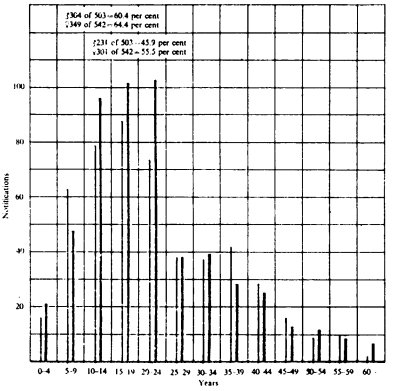

Figure 2
Age incidence in quinquennia (except the first 0–4 and the last 60+) 1964 and 1965 together

The identification of the day of the week when the observer first saw the patient merely emphasizes the difficulty in attempting to calculate the day of onset, for nearly 30 per cent of cases are first brought to the doctor on a Monday and just over ten per cent on a Saturday. This is a good illustration of the pattern of consultations in general practice: Monday is busy, Tuesday and Wednesday less so; Friday is a little brisker in anticipation of the weekend.

This investigation confirms the known facts about age incidence (figure 2). Pityriasis rosea is decidedly rare before the age of four years, and after the age of 50. The incidence in males and females is almost equal, but the disease is rather more common in females aged 10 to 24 than in males at that age. By and large it is predominantly an affair of older children and of young adults.

Is there any evidence of allergy?

To the question "Have you, or has your patient, any idea how this disease was acquired?" the vast majority answer "No". If the patient does hazard an opinion, it is usually vague or bizarre, e.g. "eating slightly 'off' Kit Kat"—"a lavatory seat in Chile"—"flea bites and late nights"—"laid on a hot-water bottle"—"bought a mongrel puppy two weeks ago"—"slept in a feather sleeping bag"—"house on fire one week earlier"—"hydrocephalic stillbirth five

weeks before"—"herald patch on neck two weeks after 'love bite' "—"shock—boy in same class killed in road accident"—and so on.

In two per cent of cases, food is mentioned, some 20 varieties; in another two per cent, drugs or external applications, most of them quite new additions to the pharmacopoeia; in another two per cent, work or working conditions of various kinds: swimming and sunbathing one per cent, clothing one per cent, sweating and strenuous exercise also one per cent. Five individuals specifically mention recent dental treatment. Emotional stress, anxiety, worry and the like, is put forward, but without enthusiasm, in about four per cent of cases; it is hard to credit that this small proportion is significant or relevant in the etiology.

In a dozen cases there is a fairly close association with known infections--chicken pox (4), mumps (2), glandular fever (2), rheumatic fever (1), measles (1), German measles (1), herpes zoster (1). These may be no more than coincidental. It may be added, parenthetically, that in 11 women the disease occurred during pregnancy; there is no record of any congenital abnormality in the child.

The conclusion must be that, in this series, there is no evidence whatever of a contact dermatitis or of an allergic manifestation.

Is there any evidence of infection?

There are some minor features which are compatible with the idea that pityriasis rosea should be classified with the exanthemata, but the difficulties begin with the attempt to prove infection by direct contact. Though information on prodromal signs and symptoms was not specifically requested, malaise, sore throat, coughs and colds, anything up to a week before onset, have been mentioned frequently. Well authenticated second attacks have been reported in 21 patients (two per cent), and even a third and a fourth attack have been noted. The interval between a first and a second attack varies from two months to ten years.

In table I are listed all those in whom a possibility of direct contact has been reported. Of these the most intriguing are nos. 1, 5, 6, 7, 8 and 11, but nothing can be deduced from the length of the interval between these pairs of individuals, except to say that this is not a highly infectious disease conveyed by droplets. Some interesting opinions on this point by various observers are given separately in the appendix.

Epidemic or endemic?

A general practitioner swith a 'list' of about 2,350 might expect, on average, to see each year two patients with pityriasis rosea, one male and one female. This is calculated from "Morbidity Statistics from General Practice" (Vol. ii, page 233) by W. P. D. Logan of the

TABLE I
DIRECT CONTACT

	Sex	*Age*	*Onset*	*Contact*	*Interval*
1.	Female Female	15 15	4. 6.1964 15. 9.1964	At same school	103 days
2.	? ? ? Male	 35	 15.11.1965	In close contact with two students who had had it	
3.	Male Female	40 31	25. 2.1965 7. 3.1965	His married sister, living ¼ mile away	10 days
4.	Female Female	? 30	9.10.1964 16.10.1964	Physical contact at work	7 days
5.	Female Female	8 17	8.1963 15. 3.1964	Sisters, same address	? 7 months
6.	Female Female	17 16	1. 2.1965 22. 3.1965	Boarders at same school	48 days
7.	Female Male	29 10	25. 2.1964 15. 6.1965	Her son, same address	15/16 months
8.	Male Female	19 14	1. 8.1964 28.10.1964	His sister, same address	88 days
9.	Female Male	7 15	16. 6.1964 8. 7.1964	Not related. Lives near her on same estate	21 days
10.	? Female	? 28	? 1. 2.1965	? in contact on 15.1.1965	17 days
11.	Female Female	26 5	9. 1.1965 10.12.1965	Mother and daughter, same address	11 months
12.	Female Male	29 27	24. 2.1964 5. 3.1965	Sister and brother, not same address	12 months

General Register Office, H.M.S.O., 1960. In the 12 months, May 1955 to April 1956, 171 doctors in 106 practices reported 326 cases of pityriasis rosea (International Classification No. 706.2)—158 males from a population at risk of 180,060, and 168 females from a similar population of 202,769. Figures from the present investiga-

TABLE II
OBSERVERS AND CASES REPORTED

	No. of cases reported																
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*Cases*
1964 Observers 180 ..	60	40	30	16	9	4	7	7	3	1	1			1			531
1965 Observers 161 ..	51	38	19	16	10	7	10	3	2	1	1	1	1			1	514

tion are not comparable, for "nil" returns were not made, and the populations at risk are not known. Table II shows the number reported by individual observers, a few of whom may have been reporting for observers additional to themselves, but of course from the same district.

Table III selects a few of the districts where the average of two cases a year has been much exceeded. To some at least of these the term "epidemic" may almost confidently be applied.

TABLE III
SOME 'EPIDEMIC' AREAS

Place, name and numbers			*1964*	*1965*
Devon	Exmouth	Hardy, R. H.	8	7
Devon	Plymstock	Tisdall, M. W.	1	12
Middlesex	Enfield	du Heaume, B. H.	8	2
Middlesex	Enfield	Piper, D. S.	11	1
Staffordshire	Walsall	Young, N.	5	16
Suffolk	Bungay	Jordan, W. M.	8	3
Westmorland	Kendal	Clark, A. M.	9	8
Yorkshire	Hull	Innes, I. D.	10	13
Rhodesia	Bulawayo	Kingsley, H. J.	14	—

Conclusion

What, then, is the conclusion? My own is that pityriasis rosea is an infection and should be accepted among the exanthemata. This investigation seems to show that no other explanation will fit the facts, and when we consider the clinical features—the prodromal signs and symptoms, the unvarying natural history, the age incidence, the equality in the sexes, the complete recovery without sequelae, the relative immunity to a second attack, and the good evidence of small epidemics—the notion of an exanthem appears reasonable.

The incubation period remains a mystery; but Dr G. W. Lowis suggests, in the final letter of the appendix, that the herald patch is

to be regarded as a primary lesion, often occurring alone and unobserved, and may be followed, though comparatively seldom, by the secondary lesions in the form of the well-known rash. This may be the clue to the difficulty in tracing one case from another. Lord Platt, chairman of A.R.C.s Committee for Research in General Practice, adds that there is surely now a strong case for examining all contacts for the next few weeks for herald patches, or at least getting tham to report anything suspicious of this kind.

Appendix—Extracts from correspondence

D. G. H. Sylvester. Bristol. "We have a large number of patients in the age group in which pityriasis rosea is common and therefore see quite a lot of it . . . My own impression is that it is a sporadic endemic condition and I have never been able to trace any relationship between one case and another."
14 January 1965

N. Young. Walsall. "I have records of pityriasis rosea in three members of one family, the father in March 1960, the mother in November 1960, and the daughter, born 8 August 1951, in June 1964. There is a boy aged about eight years in the family, who has as yet had no sign of it." 1 April 1965

S. Clifford Rogers. Rugby. "This lad has indeed had two attacks within three months, each typical in the nature of the individual spots and in their distribution and course. In each attack, however, the number of lesions was below average." 17 February 1965

J. B. Wilson. Locherbie. "One woman, who had two attacks at an interval of nine years, had her herald patch in the same position each time."
15 January 1964

H. S. Brodribb. St Leonards-on-Sea. "I am a doctor to four preparatory schools, and three girls' boarding schools. I see one or two cases per year, most frequently in boys about 10–12. They are usually isolated cases, but for the first time I have seen two cases in quick succession in one school . . . on 4 December and 16 December, both boys aged 11." 16 December 1963

C. W. Grant. Pitlochry. "We seem to get small epidemics of it every two to three years in which my partner and I will see perhaps a dozen cases in two to three months. The cases are quite unconnected and of all ages."
28 December 1963

H. J. Kingsley. Bulawayo. "Pityriasis rosea seems to be seasonal here. I may see 10–15 cases in one single month and not see any new cases again for 12 months." 21 April 1964

J. A. Tomkins. Campsie, N.S.W. "This is three I have seen in one day."
29 July 1965

G. I. Watson. Peaslake. "There are two possibilities to bear in mind. The first is that the rash may be a late secondary episode (as we think herpes zoster is) occurring months or years after a primary infection. (Late syphilitic rashes were equally mysterious until the spirochaete was discovered). The second possibility is that the rash of pityriasis rosea may only occur in some but not all affected patients, so that there seldom appears to be a link between one case and another. (This was true of paralytic poliomyelitis and is still often true of glandular fever)."
26 June 1964

G. W. Lewis. Leeds. "About a year ago I saw a man with pityriasis rosea at a foundry where I am part-time M.O. He volunteered the information that two of his mates had developed a similar rash the previous day. I examined these

other two men and found that they also had pityriasis rosea. These three men worked on the same moulding machine but had no contact with each other outside working hours. None of their families, friends or workmates had had a rash within the previous year so far as they were aware. I had never previously found any connection between cases; I had never seen more than one case in a family or even a family group." 12 January 1964

"At another factory (precision engineering) I saw three cases of pityriasis in one week, two men and one woman. They worked in different departments widely separated from each other and had no social contact with each other, in fact they did not know each other." 12 January 1964

"When I see a case of pityriasis rosea in my general practice, I expect to see about another three cases in the following month (in a practice population of 1,500). I also see sometimes in this same month an odd case or two who consult me about a lesion which I consider to be a herald spot. The patient is reassured and told that they may develop a widespread rash, but this they rarely do. Since no one who was not bordering on a state of hypochondriasis would dream of consulting a doctor for such an insignificant lesion, it may be that there is a widespread epidemic of primary lesions at that time but that secondary lesions occur in only a very small number of these." 16 January 1964

Daniel Drake's Boyhood

And what natural boy would not have enjoyed messing round in Dr Goforth's apothecary shop? The most exciting smells rose, like incense to the god of physic, from brown paper bundles, bottles stopped with worm-eaten corks, and open jars of ointment. You mixed the delightful ingredients together with a metal instrument to make powders that you delivered to the sick, running full tilt down the streets of the little town, splashing through puddles rather than going round them because you had to be quick, like the pony express. And when you knocked on the door of some cabin, with what joy you were greeted by the anxious wife or mother, how eagerly the powder you had prepared was received by frightened hands.

Doctors on Horseback. Pioneers of American Medicine. JAMES THOMAS FLEXNER. New York. Garden City Publishing Co., Inc. 1939. Pp. 181.