AN EPIDEMIOLOGICAL STUDY OF PITYRIASIS ROSEA IN MIDDLE ROAD HOSPITAL

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SYNOPSIS

Pityriasis rosea is a common skin disorder seen in dermatological practices. A one year prospective study on pityriasis rosea was carried out in Middle Road Hospital, Singapore. A total of 214 patients were studied. The incidence rates by age, sex and month were analysed. The peak incidence was in the 20-24 age group. There was a male predominance. More patients with pityriasis rosea were seen in the months of March, April and November. The clinical features in our patients concur with other studies. Blood for VDRL was done on 170 patients. Two had a biological false positive test. Total white counts were normal in 97.9% of specimens done. The rash lasted from 1 to 8 weeks in 84.4% of the patients with most patients suffering from the rash for 5 weeks.

Key words: Pityriasis rosea

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INTRODUCTION

Pityriasis rosea (PR) is a common skin disorder seen in dermatological practices. It usually presents with a solitary lesion called a herald patch followed by a maculopapular eruption distributed along the lines of cleavage giving rise to a Christmas tree appearance. The presence of collarette scales is also a feature. The etiology of the condition remains unknown. The epidemiological evidences for a probable infective etiology consist of seasonal variation in incidence, an increased incidence among dermatologists and occasional reports of two or more cases occuring in the same family or intimate environment (1, 2, 3).

A prospective study with the following aims was undertaken in March 1986:

1. To collect epidemiological data on patients with PR.
2. To study monthly trends in incidence and
3. To assess the accuracy of clinical diagnosis.

Materials and Methods:

Patients attending the outpatient clinic at Middle Road Hospital were studied. The diagnosis was based on the presence of a herald patch and/or characteristic features such as collarette scales and 'Christmas tree' distribution.

A detailed history including preceding or concurrent upper respiratory tract infection, atopy and household concurrence was taken.

Blood was taken for VDRL and total white counts.

Microscopy of skin scrapings for mycelium was also done.

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Patients were reviewed six weeks after the first visit. At six weeks, patients were assessed on the state of the condition and diagnosis reviewed. Those who did not turn up were contacted through the telephone as far as possible. They were asked on the total duration of the rash.

The study was carried out over a period of one year, from March 1986 to February 1987.

Results:

A total of 218 patients were studied. Four patients were excluded as the diagnosis was doubtful on review at six weeks.

Incidence by age, sex and months:

The ages of the patients ranged from 1 to 61 (Table 1). Peak incidence was in the 20-24 age group in the male population and 25-29 age group in the females. The male to female ratio was approximately 1.9 to 1. The incidence of pityriasis rosea peaked in March and April with a lower peak in November. (Figure 1)

Associated conditions:

50 patients (23%) had concurrent or preceding upper respiratory tract infection in the last one month. 21 patients (9.8%) gave a history of atopy. 10 of these patients have bronchial asthma and 3 with vasomotor rhinitis. Details of atopy were not stated in 8 patients.

A concurrent family history of PR was found in only 3 patients. 38 (17.8%) patients revealed a drug history either concurrently or within the preceding one month. The drugs taken included antibiotics, antihistamines and analgesics.

Clinical Features:

Systemic symptoms were not a feature in these patients. Most complained of itch ranging from mild in 93 patients, moderate in 72 to severe in 35. Only 13 patients (6%) did not complain of pruritus. Herald patch was present in 92 patients (43%). This was situated on the trunk in the majority (60.9%) of patients.

The lesions were papular in 60.3%, macular/maculopapular in 38.3% and papular/vesicular in 0.9% of patients distribution.

The distrubution of the lesions was typical (ie truncal and proximal limbs) in 191 (89.3%) of patients. 17 (7.9%) patients had a generalised rash, 5 (2.3%) with an inverse pattern and 1 (0.5%) localised to the suprapubic area.

Investigations:

Blood for VDRL was done on 170 patients. There were two patients with a biological false positive test. The rest, 168 patients (98.8%) had a negative test.

Total white counts were done on 146 patients. The counts were normal (4000-11000/cu mm) in 143 patients (97.9%). Differential counts were, however, not analysed.

Fungal scrape was done on 155 patients. Mycelium was not detected in any patient.

Clinical Course:

Of the 214 patients studied, 61 did not turn up for review at 6 weeks and could not be contacted by telephone. We were able to analyse the duration of the condition in 135 patients. The remaining 18 were uncertain of the date of complete resolution. The rash lasted from 1 to 8 weeks in 114 (84.4%)of the 135 patients studied, with most patients suffering from the rash for 5 weeks. In the remaining 21 (15.6%) patients, the duration of the condition ranged from 8 to 16 weeks.

Discussion

The diagnosis of pityriasis rosea (PR) is based on clinical features as there is no generally accepted or well esta blished criterion for diagnosis. Hence, the final diagnosis cannot be unequivocally confirmed clinically or histologically.

Most of the recent clinical studies on PR indicate a peak incidence at 20-24 years of age or between 10 and 35 (1, 4, 5, 6). Our study shows a similar age distribution. It has also been shown that the disease is seen equally in both sexes (1, 5) although one recent report showed a slight female preponderance (6). Our study, however, showed an almost 2 to 1 male:female ratio. This was compared with the sex ratio of all patients with dermatological conditions who were seen in MRH in 1986, which was 1.1:1. It was found that the male predominance in PR was highly significant ($X^2 = 11.67$ $p = 0.0006$).

Incidence of PR has been reported to peak during the colder months of the year in temperate countries (1, 4, 5, 6). In a study from Nigeria (7), the incidence peaked during the early part of the rainy season. This corroborates with findings in Kenya (8). The mechanism for the seasonal variation in incidence is unknown. Our study showed a peak incidence in March and April and a lower peak in November. There is rain all year round in Singapore. The wettest months tend to be from October to January and the driest from June to August. Our results do not concur with other studies though the lower peak incidence in November falls within the wetter months. A possible reason for the much greater incidence of PR in March may be an artefactual one as the study was started in March. There is hence a greater tendency for doctors to refer patients for the study.

PR is a disease of unknown origin. Many epidemiological and clinical features suggest that an infective agent, most probably a virus (2, 4, 9), may be implicated. The natural history of the disease, with a primary lesion which could correspond to the site of inoculation, a disseminated secondary eruption after an interval, a self limiting course, and the infrequency of second attacks, are all features paralleled by many diseases of proven infective origin. In their excellent work, Bjornberg and Hellgren (1) listed many conditions that have been implicated as possible causal or precipitating factors, such as infective agents, atopic state, seborrheic dermatitis, pregnancy, mental stress, skin lesions and others.

A recent study (6) suggested that atopy is a predisposing factor and infection a precipitating factor as either or both conditions occurred in 33% of the patients. This, however, was not a case control study. In our study, 23% of patients had concurrent or preceding URTI over the last one month. 9.8% has a history of atopy. One cannot draw any conclusions regarding the significance of these findings in the causation or pathogenesis of PR as there was no control group study.

A study from Nigeria (7) showed the presence of leucopenia with a relative lymphocytosis early in the disease in all patients. These findings are consistent with a viral infection. Leucopenia was not observed in our patients.

Differential diagnosis:

The diagnosis of PR usually presents little difficulty as the distribution, morphology and the absence of constitutional symptoms are sufficiently distinctive.

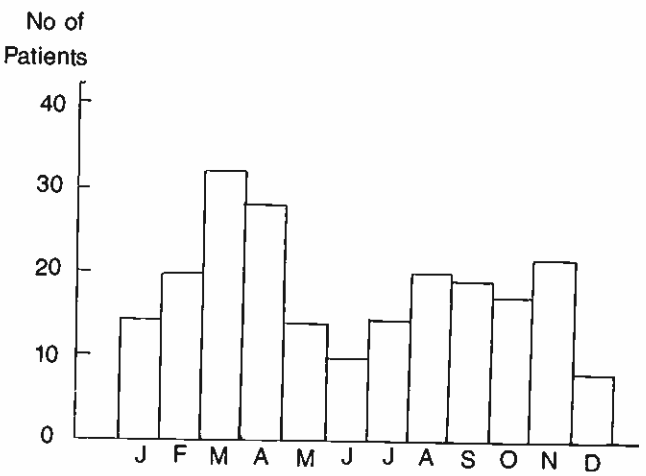
Our study confirms that PR is a distinctive entity not easily mistaken for other conditions such as secondary syphilis. None of the patients whose blood was tested for syphilis turned out to be positive though there were 2 BFP.

Most of the patients had their rashes cleared within 5 weeks. This further confirms the accuracy of clinical diagnosis of PR.

Table 1.
INCIDENCE OF PITYRIASIS ROSEA BY AGE AND SEX.

Age Group (Year)	Male Patients (No of cases)	Female Patients (No of cases)	Total
0-4	2	3	5
5-9	2	2	4
10-14	6	3	9
15-19	30	12	42
20-24	43	20	63
25-29	23	22	45
30-34	13	8	21
35-39	11	2	13
40-44	2	2	4
>44	7	1	8
Total	139	75	214

Figure 1
Incidence of Pityriasis Rosea by Month



Conclusion

A one year prospective study on pityriasis rosea was carried out in Middle Road Hospital. A total of 214 patients were studied. The incidence rates by age, sex, and month were analysed. The study showed male predominance and peak incidences in the months of March, April and November. The significance of such findings requires further investigations.

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