State of Alaska Epidemiology **Bulletin**

Copies of any bulletin may be ordered by calling the Section of Epidemiology at (907) 269-8000 or by writing to us at PO Box 240249, Anchorage, Alaska 99524-0249

Bulletin No. 19
October 24, 1986

Pruritic Papules Plague Pioneers

On September 15, the Epidemiology Office was called to assist in controlling an outbreak of pruritic rashes among patients and nursing staff of the Ketchikan Pioneers' Home. Eight people had been examined by either local physicians or the public health nurse: three were treated for scabies, four for dry skin, and one for staph infection.

A case was defined as anyone with complaints of intense itching and a papular rash. Physical examination, interviews, and a review of medical records identified 18 of 48 residents who met the case definition - a 38% attack rate. The most frequent site of involvement among resident cases was the back (71%). No residents had the scaling, crusted lesions suggestive of Norwegian Scabies, but the nursing staff reported that one resident with extensive crusted lesions who was admitted in February had died on September 11. No illness was reported among visitors or family members of the residents.

The attack rate among nursing staff was 63% (17/27). The most frequent sites of involvement were the arms (71%) and the abdomen (59%). Although 13 nurses were treated with one or more applications of lindane, only one experienced a sustained cure. Temporary remission after treatment with lindane followed by recurrence after return to work was the usual pattern. The nursing staff had 40 household contacts; 7 of the household contacts (18%) met the case definition.

The clinical signs and symptoms, pattern of transmission, and response to therapy were all consistent with the diagnosis of scabies. The involvement of the back among residents was typical of infestation of bed-ridden patients, and the involvement of arms and abdomen among nurses was consistent with transmission by contact during patient care. Treatment of individual cases resulted in only a temporary cure because of reinfestation.

Scabies is a highly contagious condition due to a mite, Sarcoptes scabiei. The mite is usually transmitted to individuals from another person, but because mites can live 2 to 3 days off the skin, inanimate objects may also play a significant role in transmission of scabies. The intensely itching rash is the result of an allergic reaction to the mite as it burrows beneath the outer layer of the skin. Itching is typically worse at night and after exposure to heat. Because the rash represents an allergic reaction, the incubation period may be as short as one day or as long as two months, depending upon previous exposure and sensitization. Infested persons are contagious whether a rash is present or not. There is no specific immunity to scabies and reinfestations commonly occur.

All infested persons should be treated at the same time to avoid reinfestation. Linens and clothing should be laundered and dried on a hot cycle. Family members and close personal contacts should do the same. Failure to eradicate scabies is due to failure to treat all contacts simultaneously.

Treatment of scabies is simple and effective. Lindane, in a 1% solution or cream, is applied to adults overnight (or for 10-12 hours) to the entire body surface, sparing only the head. Afterward, the medication is washed off. Treatment should be repeated seven days later. When lindane is applied as directed, there are no toxic side-effects.

The diagnosis of scabies in an individual patient may be difficult. The appearance and pattern of distribution of the rash may be atypical, and recovery of the mites for positive identification is often difficult. Diagnosis in an outbreak is facilitated by recognition of common symptoms and the typical, highly contagious, pattern of transmission. A fully integrated effort, relying on total cooperation of all patients, staff, employees, physicians, and their families is absolutely required to eradicate scabies. Meticulous adherence to the treatment recommendations is essential. Failure of any individual to obtain recommended treatment can defeat the control program and allow reinfestation to occur.