

ISOLATION-WARD TREATMENT FOR DERMATOSES

I. *Clinical Experiences*

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Abstract. A new isolation-ward for the treatment of patients with dermatoses is presented. The main indications for admission to the ward are infections of the skin, primary or secondary to occurring dermatoses, dermatoses with increased infection susceptibility and treatment with corticosteroids or cytostatic agents.

In recent years the need to provide improved isolation care for certain patient categories of the dermatology department of Karolinska sjukhuset has been necessitated, due primarily to increasing numbers of primary and of secondary skin infections including a significant number of hospital infections. Furthermore there has been an increase in cases with a high infection susceptibility due to treatment with cytostatic drugs and/or corticosteroids.

In the middle of September 1969, a new isolation ward unit (IWU) was opened at the dermatology department of Karolinska sjukhuset, based on earlier planning work (2).

The aim of the present paper is to give a short account of the work of this IWU during one year.

The structure of the ward unit is presented in Fig. 1. All persons entering the unit must pass through a changing-room where they put on a gown and shoe covers. The unit consists of six single-bedded rooms and three double-bedded rooms, all equipped as isolation rooms with ante-rooms for gowning and ventilation which prevents crosscurrents of air between the rooms. All treatment is given in the rooms, except for medical baths, for which the unit has its own bathroom. For routine care and treatment of the patients, the staff wear gowns. A special gown is used for each room and is put on and taken off in the anteroom. In "strict isolation" of heavily infected

or specially susceptible patients, the attending staff also wear disposable gloves and shoe covers. During 1970 equipment for warm dry air treatment, as described by Birke et al. (1), also was installed in one patient room in the IWU for the treatment of patients with, for example, exfoliative dermatitis, Lyell's syndrome.

175 patients were admitted to the IWU during the year, representing all age groups from newborn to aged persons. The distribution according to age and to sex is given in Table I. The duration of hospitalization is shown in Table II. The average ward stay per patient was 20.1 days compared with 21.6 days for the other ward units of the clinic. According to Table II, patients with a significantly longer ward period were not chiefly recruited among older persons.

One of the leading principles for the admission of patients to the IWU was that patients with infective dermatoses should primarily be taken care of at the unit, and later transferred to other ward units of the clinic when the actual infections were treated. Similarly, patients from other ward units of the clinic—and in some cases from other clinics—were transferred to the IWU if signs of a heavier skin infection were detected. For practical reasons, however, the majority of the patients were admitted directly from or discharged to their homes.

Diagnoses which provided indications for admission are shown in Table III. Patients with infected eczemas of various kinds were predominant, mostly atopic dermatitis, and pyodermias, among them several cases of erysipelas as well as tinea corporis due to trichophyton infections. There was also a heterogeneous psoriatic group

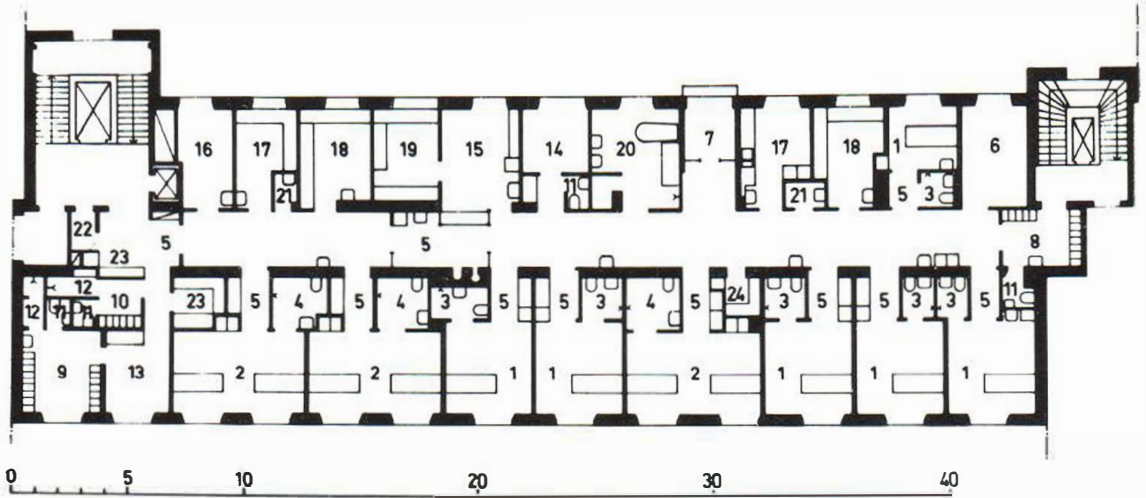


Fig. 1. The ward of infectious diseases in the Department of Dermatology, Karolinska sjukhuset, Stockholm.

1. Single-bed room
2. Two-bed room
3. Lavatory with shower
4. Lavatory with shower for patients confined to their beds
5. Sluice (outer, inner and sickroom sluice)
6. Day room
7. Smoking room
8. Dressing room, sluice
9. Dressing room, female staff
10. Dressing room, male staff
11. WC
12. Shower
13. Staff room
14. Doctor's room
15. Nurse's room
16. Doctor's and nurse's office
17. Kitchenette with dishwashing-machine (water temperature 90°C)
18. Utility room with disinfection equipment
19. Clean room, sterile stores
20. Bathroom
21. Cleaning room
22. Refuse chute (dirty clothes)
23. Stores, Main stores in sluice, Main stores of pharmaceutical preparations
24. Additional stores (corridor, sluice, sickrooms)

including cases with psoriatic erythroderma, pustular psoriasis, infected psoriasis as well as patients with extensive and intensively scaling psoriasis. Several of the patients with different crural ulcers were treated in the IWU in the postoperative state (operation for hypostasis according to Cockett and/or homotransplantation) when need-

ing a strict avoidance of secondary infections. The venereologic cases were represented by cases of infectious syphilis, Reiter's syndrome or by cases with gonococcal complications as well as by patients with lymphogranuloma inguinale. Ten patients were suffering from viral infections; it was significant that patients with Kaposi's varicelli-

Table I. Age and sex distribution

	♂	♀	Total
-1890	5	5	10
1891-1900	8	10	18
1901-1910	6	18	24
1911-1920	14	10	24
1921-1930	10	16	26
1931-1940	17	7	24
1941-1950	15	13	28
1951-1960	7	6	13
1961-	3	5	8
	85	90	175

Table II. Duration of hospitalization in days

Days		
1-9	48	(8) ^a
10-19	65	(16)
20-29	28	(10)
30-59	25	(14)
60-	9	(4)
	174	(52)

^a In parentheses: of which referring to patients older than 60 years of age.

Table III. *Distribution of disorders indicating need for admission*

Pyodermia, acne/tinea	27	(7) ^a
Venereal diseases	11	
Virus diseases (herpes, vaccinia)	10	(1)
Tuberculosis, leprosy	2	(2)
Eczema	47	(5)
Crural ulcer	19	(3)
Psoriasis (erythroderma, pustular, etc.)	23	(7)
Collagenoses	7	(1)
Bullous dermatoses	8	(1)
Toxicoderma, urticaria	9	(2)
Malignancy	2	(2)
Miscellaneous	10	(3)

^a In parentheses: of which referring to patients treated more than one month.

form eruption or with vaccinia could also be treated at the IWU. Previously, such patients were only admitted to special infectious disease clinics. The other main indication for admission to the IWU concerned patients suffering from collagen diseases or bullous dermatoses treated with high dosages of corticosteroids or immunosuppressive or cytostatic agents (such as Imurel and Methotrexate).

A relatively high number of staff is necessary in an IWU of the type and with the function described. It consists of 4 nurses, 8 nursing assistants (one of each group was on duty during the night), one secretary and a person aiding with the medical baths in the bathroom of the IWU. Thus the mean cost per day per patient in this IWU was significantly higher than that of the other ward units of the clinic.

Isolation in the single-bedded rooms with modern equipment (including bath-room with shower, TV, telephone etc.) was well-tolerated. However, in some special cases the isolation was felt as psychologically inconvenient. Placement in the double-bed rooms, however, gave rise to great medical problems due chiefly to differences in basic disease and in bacterial colonisation of the skin.

Good team-work is absolutely necessary to combat infections and avoid hospital infections. The cross infection officer of the hospital, who regularly followed the work in the IWU, is a member of this team.

The efficacy of the isolation is shown by a significantly lower frequency of bacterial colonization of the skin in patients treated at the IWU

compared with that in patients treated at other ward units of the clinic (3, 4). Thus treatment on a isolation ward of this kind seems to be highly effective in preventing bacterial colonization and hospital infections in patients with dermatoses.

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