

ACTH THERAPY IN PEMPHIGUS VULGARIS

By MAJOR A. N. CHAKRABORTY, M.B. (Cal.),

F.R.F.P.S. (Glas.), F.D.S. (Lond.)
Officer-in-Charge

A. K. BANERJEE, M.B., D.T.M. (Cal.)

Assistant Research Worker
and

S. GHOSH, M.B., D.T.M. (Cal.)

Assistant Research Officer, I. C. M. R.

(Research Department of Dermatology, Calcutta School of Tropical Medicine).

H. P. C., Hindu, male, aged 70 years, was admitted in the Carmichael Hospital for Tropical Diseases, on 24th May, 1952 with bullous eruptions without any sign of inflammatory reaction on the trunk and extremities. The bullæ were of different sizes, varying from 1/3 inch to 1½ inch in diameter, mostly on the back and lower extremities some on the chest and abdomen and a few on the upper extremities. The face was exempted and there was no ulceration in the mouth. Ulcers of various sizes following rupture of the bullous eruptions at different stages of healing were seen on the trunk and extremities. Macular depigmented patches without any scarring showing sites of previous lesions were also seen along with the bullæ and ulcers. At the time of admission the general condition of the patient was fair with temperature 98°F., pulse 88, respiration 22 per minute, body weight 112 lbs., blood pressure 132/70 mm. of Hg. Besides the lesions mentioned the patient had also some existing patches of leucoderma on the hands and feet.

History

The disease started 3 months back with slight itching sensation on the chest followed by a bullous eruption. The content of the bullæ was at first clear, later turned turbid and opaque in nature, and finally ruptured leaving raw, moist ulcer with slight oozing. On application of some ointment the ulcer was showing signs of healing while several fresh bullæ appeared both on the trunk and lower extremities which eventually turned into ulcers as before. Crops of eruption followed one after the other with no remission since the start of the disease. The temperature occasionally was slightly raised above the normal level and except some discomfort and weakness there were no constitutional disturbances. The case was diagnosed as Pemphigus Vulgaris.

Laboratory Findings

Blood Hb.	13.05 gm.
R.B.C.	4.2 mill per c.mm.
W.B.C.	9.750 per c.mm.
Poly morph	72%
Lymphocyte	18%
Eosinophils	6%

Abnormal cells	Toxic neutrophil +
Reticulocyte	2%
Cell volume	40%
Mean Corp. Vol.	100.7 cu.
Mean Corp. Hb.	32.8 rr
Mean Corp. Hb. Conc.	32.6%
E.S.R.	49.0 observed. 42.0 corrected.
Van den Bergh Test	Direct Indirect Negative.

Blood Chemistry	
Blood sugar	.098%
Blood N.P.N.	.037%
Blood Uric Acid	.0035%
Blood Cholesterol	.216%

Eosinophil count from blister fluid 1000 per c.mm.

Stool	Cysts of Giardia + E. Coli.
Urine	Normal.
Urine Chloride	0.5%

Biopsy was performed and the histopathology of the section showed subepidermal vesicles. Blood vessels were moderately dilated and there was slight cellular infiltration-cellular elements were mainly lymphocytes and neutrophils.

Treatment

Locally—on admission (24-5-52) Lint. calamine with 1% phenol and 2% Mercurochrome solution was prescribed for the lesions. From 30th May, 1952 injections of ACTH were started in the dose of 20 units 8 hourly and continued for 13 days, the dose was reduced to 15 unit thrice daily for 2 days, and finally 10 units thrice daily for 3 days.

The improvement was noticed from the 3rd day; patient felt better and the formation of fresh blister was less. From the 10th day no fresh blister was noticed and the existing old bullæ healed up without any ulceration. At the end of 2nd week there was no blister and excepting slight rawness of the skin here and there, there was no actual ulceration. (See fig I)

In the later stages of ACTH treatment, when the ulcers were showing signs of improvement Aureomycin was used locally and the ulcers healed up quickly.

During the treatment of ACTH the patient was put on salt free diet and orally 20 grs. of potassium salt was given thrice daily to prevent retention of the fluid in the body. Blood pressure, body weight and urine output were recorded daily and these showed only with insignificant variations.

3 weeks after the cessation of the ACTH therapy fresh blisters reappeared but they were less in number and size than those which developed before the administration of ACTH.

Due to the high cost of ACTH the patient could not further supply the drug and the treatment at that stage had to be continued with Aureomycin, Liver Extract injections and Auto-hæmotherapy.

Some improvement was noticed during the course of the treatment with Aureomycin, Liver Extract and autohæmotherapy. Two weeks after the completion of the treatment there was another severe setback with the appearance of fresh vesicular and bulous eruptions. A course (five injections) of Germanin (Bayer 205) was administered every third day and the condition was quickly controlled. The patient is now practically free from any eruption for the last one month and his general health is good.

An interesting observation made during the treatment of ACTH was quick appearance of pigment on the depigmented patches resulted after healing of the raw areas. (See fig II) The pigment was observed first on the second day after ACTH was started and with marked progress and it continued throughout the whole period of treatment. It was observed that there was no pigmentary change on the existing leucodermic patches.

At the Massachusetts general hospital, Boston, 13 patients with pemphigus received treatment with Corticotrophin or Cortisone and good results were obtained in all (Lever, 1952). Frazier *et al.* (1951) reported cases of pemphigus treated effectively with Cortisone or ACTH. They insist on giving adequate doses, *i.e.*, 200-300 mg. daily in equally divided doses in all cases and with that doses improvement was seen within 3-5 days. Other workers also received similar results with ACTH and Cortisone.

Relapses are pretty common features in chronic Pemphigus and Frazier and his colleagues have found that even with adequate doses of ACTH reappearances of the lesions have been observed to take place approximately 2 weeks after cessation of the therapy. Readministration of the drug were required for second or third time and the response was equally good.

It has been noticed by different workers that the patient receiving ACTH for more than few weeks showed signs of pigmentation. Sprague *et al.* (1950) reported the observation that ACTH has very powerful melanophore dilating properties in frogs. Berham & Goodman (1950) have found hyper pigmentation of the skin and mucous membrane in several of their cases during treatment with ACTH. Taylor *et al.* (1950) have reported increased pigmentation of the skin and darkening of the moles in all of the patients who received ACTH or Cortisone.

Summary

(1) A case of Pemphigus Vulgaris improved with ACTH therapy has been described.

(2) In comparison to doses as advocated by other workers small dose of ACTH has been used and the improvement was obtained.

(3) Reappearance of the blister formation in mild form after 3 weeks of the cessation of the treatment has been observed.

(4) Depigmented areas left after the healing of the blister showed rapid pigmentary changes after ACTH was started.

(5) True leucoderma patches were unaffected by the ACTH therapy.

(6) Due to the high cost of ACTH the drug could not be repeated after relapse.

(7) Relapse of the condition was at first controlled by Aureomycin, Autohæmotherapy and Liver Extract, and later on by Germanin (Bayer 205) with better result.

REFERENCES

- BEHRAM, H. T., and J. *Amer. Med. Assoc.*, **144**,
GOODMAN, J. J. (1950). 218.
- FRAZIER, C. N., LEVER, W. F., LEEPER, R. W.,
KUEPER, C. S., BIENVENU, L. J., LEDONNE,
J. E., and LEVY, S. W. (1951).
LEVER, W. F. (1952) .. *Arch. Dermat. and Syph.*,
65, 498.
- SPRAGUE, R. G., POWER, M. H., MASON, H. L.,
ALBERT, A., MATHIESON, D. R., HENCH, P. S.,
KENDAL, E. C., SLOCUMB, C. H., and
POLLEY, H. F. (1950). *Arch. Intern. Med.*, **85**, 199.
- TAYLOR, S. G., AYER, J. *Amer. Med. Assoc.*, **144**,
J. P., and MORRIS, R. S. (1950). 1058.

A NOTE ON THE LEPEHNE— PICKWORTH STAIN

By B. BHATTACHARJEE, M.B.

Sir U. N. Brahmachari Research Fellow Kala-azar
Research Department, School of Tropical Medicine,
Calcutta

The Lepehne-Pickworth stain originally designed for staining cerebral capillaries is being widely used to demonstrate the finer vascular pattern of different organs, (De, & Sen Gupta, 1951).

For more than two years, Wiler has been using this method in his experimental work on rabbits to determine vascular changes in the internal organs as a result of administration of various drugs.

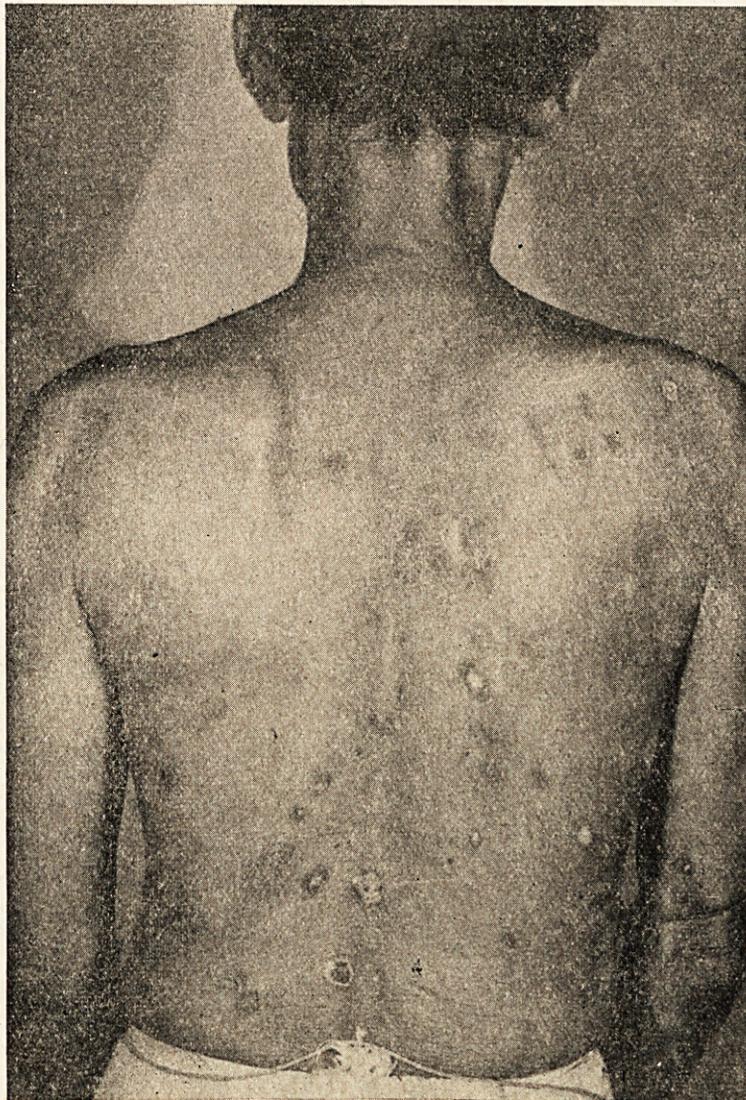


Fig. I.—Blisters cleared up after ACTH THERAPY.



Fig. II.—Appearance of pigment on the depigmented patches after ACTH THERAPY.