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Liv.52 in burns cases

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INTRODUCTION

Liv.52 (The Himalaya Drug Co.) has been reported to have a stimulating and protective influence on the hepatic parenchyma (Damle, *et al,* 1966) as also an anabolic effect, without the side effect of anabolic steroids (Desai and Shah, 1976; Sinha *et al,* 1973). So it was decided to study the effect of this drug in burns cases in Kashmir, since burns trauma is very common in this part of the country.

MATERIAL AND METHODS

A random sample of fifty fresh cases of burns admitted to Surgical Wards of S.M.H.S. Hospital, Srinagar, Kashmir between October 1978 were chosen for study. These patients were divided into two groups:

Group A: 25 cases who received burns regime but no tonics, anabolics or protein hydrolysates.

Group B: Another 25 cases, in addition to burns regime, received Liv.52 tablets or concentrated Liv.52 drops.

Patients of 14 years and above received 2 tab. t.d.s. while children between 6 years and 13 years received 15 drops of Liv.52 t.d.s. and below 6 years received Liv.52 5 drops t.d.s.

Detailed history with their weight, appetite, intake-output charts, treatment charts were kept in record. In addition to the clinical assessment, routine haemogram, liver function tests including SGOT, SGPT, urine analysis, E.C.G. and screening of chest were done in all the cases. Bacteriological study was done by the culture and sensitivity of wound swab. All laboratory investigations were repeated at fortnightly intervals till the end of nine weeks. Treatment was started after collection of first blood sample and between 48 to 72 hours following burns.

Forty per cent of our cases having superficial burns healed within first fortnight and were discharged within a week after admission. They were asked to report for follow up. Parts were left exposed on 14^{th} day and none needed skin grafting.

Deep dermal burns (forty two per cent) healed (Group B) by epithelialization and were discharged within 2-3 weeks after hospitalisation. Tangential excision was done in stages but no grafting was done.

18% were deep burns out of which 13 per cent were electric burns, 3 per cent kerosene oil burns, 2 per cent chemical burns. They needed tangential excision and strip (superficial) skin grafting, over healthy granulating wounds.

OBSERVATIONS

In this study, females exceeded males (the ratio of female: male — 3:1), probably because domestic burs are common in Kashmir. Maximum incidence of burns was between ages of 21 to 30 years (30 per cent). Kangri burns constituted 60% of flame burns, 30% were due to kerosene-oil stove, 5%

were due to scalds as a result of spilling of hot tea or milk and 5% due to miscellaneous causes like open fire.

In Group A, plasma proteins started returning to normal by 7th to 9th week depending upon the severity of burns. SGOT, SGPT, Blood Urea were raised in earlier samples but started returning to normal by the end of the 1st week in Group B and 7th week in Group A. Fall in plasma protein level was observed following burns which started returning to normal by 5th week in Group B (Table I).

Table I: Shows average serum protein levels in Group B (on routine burns therapy + Liv.52)

Sl. No.	Time	Total Proteins mg/ml	Serum Albumin mg/100 ml	Serum Globulin mg/100 ml	Serum Alk. Phosphatase K.A.U.	Serum Bilirubin mg
1.	1st week	4.5	3	1.5	14	0.8
2.	3rd week	5.7	3.7	2.0	10	
3.	5th week	6.8	4.2	2.0	8.8	
4.	7th week	6.5	4.9	2.0	7.0	
5.	9th week	8.6	6.5	2.1	5.0	

Table II: Shows average serum protein levels in Group A patients (on solely routine therapy)

Sl. No.	Time	Total Proteins mg/10 ml	Serum Alb. Mg/100 ml	Serum Globulin mg/100 ml
1.	1st week	4.5	3	1.5
2.	3rd week	4.9	3.3	1.6
3.	5th week	5.4	3.4	1.9
4.	7th week	6.0	4.2	2
5.	9th week	6.2	4.2	2

Bacteriological study revealed no growth of micro-organisms.

In deep burns, tangential excision and skin grafting was done within the 2nd week or within the first fortnight following burns. In Group B, earlier epithelialization and take of grafts was 90 to 100 per cent, while in Group A, take of grafts was 50 to 70 per cent only.

The anabolic effect of Liv.52 is also shown by the fact that graft take was 90 to 100 per cent in Group B, while Group A being in prolonged negative nitrogen balance showed less take of graft.

No side effects or toxic effects were observed as a result of Liv.52 treatment. There was increase in appetite, improved feeling of well being and weight gain in Group B patients on Liv.52 supplementation.

DISCUSSION

Sinha *et al.*, 1973 has reported that injury, infection, prolonged immobilisation contribute to a prolonged state of negative nitrogen balance and liver has an important role to play in the metabolism of proteins. Damle and Deshpande (1966) have reported that metabolic balance of human mechanisms is reflected in the maintenance of the physiological functions of the body. In our study, Group B patients who received Liv.52, showed better improvement in appetite, weight gain and general feeling of well-being than Group A patients.

Dayal *et al.* (1970) have reported that histologically, liver biopsy revealed reduction in protein depletion following Liv.52. The beneficial effect of anabolic agents on appetite has been reported by Dole *et al.* (1963). In our study also, Group B patients showed rise of serum protein levels by 5th week and Group A patients by 7th to 9th week. SGOT, SGPT, urea started returning to normal

picture by the end of first week which shows beginning of the anabolic phase. Kelkar, S.S. and Mahajan, R.K. (1978) have also reported that Liv.52 has a dramatic effect in reducing the SGOT and SGPT levels.

Damle *et al.,* 1966, have assumed that Liv.52 has a beneficial effect of injured liver cells in burns by promoting increased appetite, weight gain and sense of well being. Payme, 1959 has also reported that weight gain, increased appetite and sense of well being are the striking effects of anabolic agents.

Kulkarni (1970) has reported that Liv.52 by its anabolic activity counteracts the effect of Prednisolone as efficient as anabolic steroids. Gain in the levator ani muscle of castrated rats confirms the positive anabolic effect of Liv.52.

Prasad, G.C. (1980) has reported that electron microscopic study of liver following Liv.52 therapy showed inhibition in the production of proteolytic enzymes and at the same time, stimulation of nucleic acid synthesis by effecting an increase in accumulation of mitochondria, the smooth endoplasmic reticulum and ribosomes.

Liv.52 also causes positive nitrogen balance in hypoproteinaemia (Pai *et al.*) and even when it is given in large doses, Liv.52 has no toxic or side effects (Prasad, 1980). Arora (1969) has reported that Liv.52 has hepato-stimulant anabolic, stomachic, choleretic and diuretic action.

SUMMARY

Fifty cases of burns were divided in two groups. Group A comprised of twenty five patients who received burns regime only, while Group B comprised of other twenty five patients who received in addition Liv.52. In the Group B patients, the anabolic effect of Liv.52 was studied. This was reflected by increase of appetite, sense of well being early epithelialization, return of positive nitrogen balance and early increase of plasma protein levels following treatment with Liv.52.

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