SUMMARY

Man suffered burn injuries since he began using fire. Burn therapy most likely began at man's first adverse encounter with it. The widely empiric remedies were conceived in ignorance and of course were excusable.

Fortunately enough knowledge is now available to permit a rational evaluation of agents currently available or newly proposed for the treatment of burn.

Burns are ischaemic wounds and so systemically administered antimicrobial agents are not reliably delivered to the site where they are most needed. Topical agents are therefore best adjuncts in the treatment of burns.

A topical agent should be antiseptic, non-antigenic, non-toxic systemically or locally and local analgesic effect is also desirable. It should minimise the vaporizational heat loss and of course should be of low cost.

Every technique discovered so far has its own advantages and disadvantages. Autogenous skin grafting is the best covering material amongst all suggested till now. But it has it's own limitations in the form of
limited supply, unfitness of already shocked patient for surgical procedure involved in skin grafting and sub-graft suppuration.

The present work was undertaken and designed to evaluate the use of Povidone Iodine with Neosporin powder, Silver Sulfadiazine & Amniotic membrane in the local topical application in burn and to assess the supremacy of either of them. Seventy five patients were kept in the study. Out of 75 cases, 22 were males and 53 were females. Majority of them belonged to younger age groups. Major cause of burn appeared to be thermal injury.

Cases were divided into three groups. One group comprising of 50 patients was treated with combination of Povidone Iodine lotion + Neosporin powder (PVP + N). Second group comprising of 18 patients was treated with Silver Sulfadiazine (SSD). Third group comprising of 7 patients was treated with Amniotic Membrane (AM). In all the three types of dressings, patients were observed for relief of pain, pus formation, control of infection and rate of healing.

Application of all above three dressings material was done after prior cleaning by 1% Savlon and sterile saline. Patients, who were treated by Povidone Iodine with Neosporin powder, no dressing material was used and wounds were left open. While using 1% Silver Sulfadiazine
ointment, wound can also be left open or it can be covered with gauze. By the use of amniotic membrane, wound remained closed.

There was minimum incidence of infection, when Povidone Iodine with Neosporin powder was used. The main offending organism responsible for infection was Pseudomonas. Pain was observed more with Povidone Iodine & Neosporin in initial stage but it is almost reduced in successive applications because of formation of crust and no need of daily dressing.

As for rate of healing most of the superficial burn patients was treated with PVP + N showed complete healing within 30 days with the majority recovering within 15 days while in the SSD group although the majority healed within 30 days, a substantial number of wounds took 45 days to heal. Deep burn patients treated with PVP + N healed after 45 days. At the same time, the subescharal injection of PVP shows a distinct reduced septicaemia and local infection rates, early escharolysis followed by early graft take up and subsequent healing. In SSD group, healing was delayed upto a maximum period of 60 days. Out of the total mortality of 4 patients, two patients were being treated with PVP + N and two with SSD (Silver Sulfadiazine).
Comparing the three dressings, it was concluded that:

1. All three dressings are easily available and easy to apply.

2. There was no significant allergic reaction noticed except in one case of Silver Sulfadiazine.

3. The healing is faster in Povidone Iodine with Neosporin powder treated areas than Silver Sulfadiazine ointment and Amniotic membrane treated burn cases.

4. Incidence of infection is more in Silver Sulfadiazine treated patients than Amniotic Membrane treated areas.

Povidone Iodine with Neosporin powder gave better results than Silver Sulfadiazine ointment application and Amniotic Membrane application.