THE SIMPLE MODEL OF CHEMICAL BURN

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The object of the article is the chemical burns. The theme of the research is the chemical burn evaluation.

Many chemical burns occur accidentally through misuse of hair, skin and nail products. They mainly happen at home and at the hairdresser's.A person can be injured while using widespread chemicals such as domestic cleaners and eliminators and/or some professional chemical hair dyes and oxidizing substances for stylists. Although an increased risk of chemical burn is far more possible in the working place, especially in business and manufacturing plants which use large quantities of chemicals.

Therefore the chemical burn evaluation in the research experiment plays an important role in the development of the diagnostic techniques, of disease evaluation severity and treatment.

This condition is easily achieved with the models described, and makes it possible for units, departments and centers which are not specialized and have only limited resources to extend animal experimentation in the field of burns.

The experimental study of chemical burns in the past presented the inconvenience of the uncontrollable diffusion of the chemical agent beyond the area which it was applied to. This prevented the availability of a contrastable and unique model. However, in 1994 Kim described a model for the experimental analysis of the chemical agents effects on the skin that solved this problem. This model consists of a Teflon hernicylinder with a holein the centre. The rat is placed on the hernicylinder and the hole is made to coincide with the area of shaved skin which the chemical agent reacts on. A pressure cuff is placed on the ventral side of the animal, to adhere firmly the back of the animal to the Teflon hemicylinder.It helps prevent the chemical agent from rising beyond the limits of the open hole. The area of the hole is calculated by the surfacefunction thatexposes the chemical agent investigation. Here is the basis of the following formula:

aperture area = (total BSA x % BSA injury desired)/100

Conclusion – chemical burns are frequent happening incidents occurring both domestically and in the working place. It is highly important to develop a formula for chemical burn aperture area evaluation. Therefore, it is possible to test different chemical reagent with the model given above and,by varying the investigated skin surface, to evaluate local and systemic results.