Dynamic Chiropractic

Management of Contusions: A Conservative Approach

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The 22nd edition of Dorland's Medical Dictionary defines a contusion as a bruise. However, for the purpose of this writing a contusion will be considered as an area of soft tissue trauma which has been traumatized more severely than a simple, superficial bruise, but without the presence of a hematomatous mass. This writing will also presuppose that the soft tissue trauma is presented for treatment early, within a very few hours following its occurrence. Additionally, two therapeutic approaches will be presented for your choice and judgment relative to preference, based upon efficacy.

Initially, the contused area should be examined to ensure the absence of any nearby vascular damage, especially the absence of a hematoma. If such a lesion exists and there is a reduction in palpable pulses distal to such lesions it may be prudent to consider referral for consultation with a vascular surgeon to rule out the presence of thrombus. Otherwise, cryotherapy should begin with the application of a moist ice bag, or frozen silicone gel wrap. If the anatomical location of the lesion permits, the traumatized area should be elevated above heart level in order to enhance reduction in traumatic edema by gravity drainage. The cryotherapy should continue until the threat of hemorrhage is absent.

The moist cryotherapy will contribute to the constriction of blood vessels by reflex autonomic changes at which time a well padded compression bandage should be applied to the area of the lesion. This procedure will reduce the probability of petechiae, ecchymoses, traumatic edema, pain, and limitations in range of motion. This is an approach which has been used for many years and is effective.

The second approach, which is preferred by this author, is contrast therapy. Assuming the absence of vascular damage and thrombosis, the contused area is treated with moist cryotherapy. This may be by moist ice bag, frozen silicone gel wrap, or a vessel containing ice water depending upon the appropriateness of anatomical part being treated relative to the method chosen. The moist cryotherapy is applied for no more than 10 to 15 minutes ensuring the absence of cyanosis of the region being treated. Immediately following moist cryotherapy, the part is then transferred directly to moist heat. This may be by moist heated silicone gel wrap, moist hot pack, or a vessel of warm water. Application of the thermal agent is maintained for five to eight minutes, after which the part is once again transferred to the moist cryotherapy for 10 to 15 minutes, again ensuring the absence of cyanosis, after which it is again transferred to the thermal agent. The final agent used prior to discontinuing the treatment process should be moist cryotherapy.

Contrast therapy transfers may continue for three or four transfers if desired, or until the patient begins to experience fatigue. This may be a physically exhausting procedure for the patient. Contrast therapy makes use of the physiological principle involved in the vasomotor changes occurring under the influence of the thermoregulatory center in the hypothalamus. It has been this authors experience that patient rehabilitation occurs approximately twice as rapidly as in the case of the first procedure and with less probability of residual pathology. Early initiation of range of

motion exercises, when appropriate, tend to enhance the repair of soft tissue with areolar, rather than collagen, tissue which is desirable.

Following contrast therapy, the same principle of elevation of the traumatized region, when practical, applies. Also, the application of a well-padded compress remains advisable and the part being treated should be rested for the first 24 to 48 hours.

The reader is reminded that cryotherapeutic and thermal agents must be applied with caution, or not at all, to the very young and the very old. The very young may not have a sufficiently mature thermoregulatory system to manage vasomotor alternations safely and are therefore more prone to erythema ab igne, or even burn, than the older child. The elderly may not be able to react properly to such agents due to degenerative changes which occur in the process of aging and thereby may render them equally subject to thermal or cryogenic tissue damage.

References

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