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Suggestions for Investigative Studies of Syncardon: Cardio-Synchronous Pulsation Therapy

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SUGGESTIONS FOR INVESTIGATIVE STUDIES OF SYNCARDON
(CARDIO-SYNCHRONOUS PULSATION THERAPY)

I. Treatment of Diabetic Neuropathy with or without proven peripheral vascular insufficiency.

A. A diabetic patient presented herself with a complaint of numbness of the feet which made it difficult to continue her job requiring prolonged standing. She was apparently diagnosed as a case of Diabetic Neuropathy because of her relative fair blood flow. Treatments three times weekly for two months relieved her numbness and enabled her to continue on her job. Her condition in reality could be called "Ischemic Neuralgia" as compared to the term Neuropathy which does not disappear even with improved blood flow. Often the ischemic foot or toes show little gross change after Syncardon therapy but even a small gain in blood flow apparently causes the symptoms to abate. Apparently the nerves require only a small quantity of blood to improve their function.

When it is difficult to determine whether a patient is suffering from irreversible Diabetic Neuropathy or Ischemic Neuralgia, a therapeutic trial of daily Syncardon therapy for ten to fourteen days may prove helpful.

B. Additional disorders where Syncardon therapy can be of benefit.

1. Concomitant therapy before and after Femoral-Popliteal By-Pass.

   The above therapy, by opening up dormant collateral aterioles in the extremes of the extremity, insures more promise of success when a Femoral-Popliteal By-Pass becomes necessary.
2. Peripheral vascular insufficiency secondary to atherosclerotic or arteriosclerotic changes can also be helped.

3. Buerger's Disease

4. Diabetic Ulcers or Gangrene

f. Reflex Sympathetic Dystrophy.

II. Prevention of Calf Vein Thrombosis in Orthopedic Surgery.

Efforts to prevent thrombosis in the veins of the calf with subsequent Pulmonary Embolism have not been too successful. This has been especially true in hip replacement surgery where heparin and dicumarol have lead to serious side effects.

A cuff placed about the calf of the operated lower limb could be hooked up to a Syncardon. The nurse would be shown how to allow air to enter the cuff to a pressure of 15 to 20 mm of mercury as shown on the meter. A treatment of one hour every 6 or 8 hours would suffice to prevent thrombosis in the calf veins and obviate the need of anticoagulants.

IV. Syncardon Therapy in the Disturbance of Lympathatic Flow.

Edema of the arm following radical mastectomy or radiotherapy is quite common. Nias (Brit. MC. 517 P:1005-08' 1960) found that in 305 unselected cases of cancer of the breast treated with surgery, radiotherapy or both, 36% had swelling of the arm greater than 2.5 cms. It has been found, that once this swelling is allowed to continue, thickening of the swollen tissue develops, and the condition becomes permanent. The Syncardon has been found useful in clearing this edema of the arm in many cases. However, as with many other conditions, preventions would be better than cure. It would therefore, be well to try a group of cases with preventive syncardon therapy.
Following radical surgery on the earliest sign of edema of the arm the patient should be advised to receive outpatient Syncardon therapy three times weekly. If the condition worsens, hospitalization should be advised and twice daily therapy instituted for one week. On discharge the patient could return for outpatient therapy as above. At a later date weekly therapy should suffice. These treatments would be given over a six month period, and results tabulated.

Case Report: M. H. female, age 78, was examined and found to have carcinoma of the breast (Jan. 25, 1957) She was referred to the hospital and a radical mastectomy was performed. A few weeks following surgery, edema of the arm developed which in spite of the administration of mercurial diuretics, increased in size until the entire arm was twice the normal size. Syncardon therapy was then started on April 19, 1957, and continued for six weeks, at the which time, the edema had completely disappeared and function of the arm returned to normal.

V. Syncardon Therapy during amputation to prevent Post-Operative Hematoma Formation.

A patient who refused amputation above the knee for spreading gangrene of the foot was treated in the following manner. During surgery lasting 3/4 hour, a cuff was placed about the thigh and Syncardon therapy instituted. A pressure of 70 mm of Mercury was continued until completion of the amputation below the knee. Dormant bleeders became active under the increased pressure and were carefully tied off. The result was a clean wound with no post-operative bleeding.
Syncardon therapy started 48 hours after surgery caused no additional bleeding and the flaps healed perfectly at the end of 3 weeks. The patient was discharged and at a later date was fitted with a Prosthesis that enabled her to carry out her usual household and shopping duties.

During an amputation a cuff leading from a Syncardon could be inflated from 20 to 70 mm. of Mercury depending on the potency and propulsion of blood at the site of the incision. Prior to closing the wound increased cuff pressure would warn the Surgeon of possible future bleeders and these would be ligated.

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