

Case Report : Anaesthetic Management of Raynaud's Disease

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I. Introduction

Raynaud's phenomenon is a disorder of microvasculature which is characterized by ischemia of the digits in response to cold which produces "triphasic" color pattern¹ (white to blue to red) with swelling & numbness of fingers & toes which are usually affected. Less affected extremities are nose, ear, & nipple². Ischemia in Raynaud's disease is due to vasoconstriction of digital arteries, arterioles, & cutaneous arterio-venous vessels³.

II. Case Report

A 28 year female admitted with complaint of wrenching & pain abdomen. Endoscopy of Upper G I showed Hiatus hernia Gr II. She was posted for laparoscopic repair of hiatus hernia & referred to anesthesia department for PAC. It was observed during PAC that both upper & lower limb fingers & toes showed bluish discoloration with swelling. On further enquiry she came up with history of blanching of hands followed by bluish discoloration & redness of the fingers & toes for last 18years. Symptoms were reported more intense in rainy & winter season. She had a strong family history that her sister suffered from the same disease.

On PAC all vitals & investigations were normal. She was not on any medication. Angiography showed reduced blood flow & velocity of bilateral digital arteries in both upper limbs Doppler showed triphasic & normal PSV in both lower limbs. Thus, Diagnosis of Raynaud's disease was confirmed.

Patient was scheduled to undergo a laparoscopic surgery for hiatus hernia. Fluid was warmed to ---- before infusion. In O T I.V line was taken on the forearm of the patient & pre warmed fluid was started. All probes of multipara monitor, i.e. Pulse, BP, ECG & spo2 were attached. Body Warmer was started to keep patient warm. Pre medication was done with Fentanyl, Glycopyrrolate & Metaclopramide & Ranitidine. Induction was achieved with propofol & intubation was facilitated with injection atracurium. After intubation anesthesia was maintained with oxygen, nitrous oxide & sevoflurane.

Warm blankets, were placed under the palm of both the hands maintained the body temperature at 37.3°C throughout surgery. After reversal with neostigmine & pyrolate patient was extubated. Colour of fingers were dramatically improved in immediate post operative period due to warm temperature which was kept throughout the surgery.

III. Discussion

Raynaud's phenomenon is a condition in which spasm of arteries causes reduced blood flow of fingers & less commonly toes & rarely nose, lips & ear are affected⁴. Episodes are often triggered by cold or emotional stress. Raynaud's phenomenon can be triggered during surgery or in immediate post operative period because of stress. So to avoid any untoward symptoms patient should always be kept warm during surgery. There are certain drugs which are contraindicated in Raynaud's disease like Beta-adrenoreceptor blocking agents like ergotamine, chemotherapeutic agents & beta blockers which are known to cause coldness & vasoconstriction. Procedures like catheterization & arterial puncture of distal extremities should be avoided.

IV. Conclusion

Raynauds phenomenon can be aggravated with cold temperature of operation theater and special care is to be taken to keep patient warm. In this case we did that successfully with warm I.V fluids, warm blankets & warmer. Anaesthesiologist should avoid using all those drugs which cause vasoconstriction. These drugs include epinephrine, nor-epineprine, mephateramine & thiopentone .

References

Neena Rungta. " Case Report : Anaesthetic Management of Raynaud's Disease."IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 8, 2018, pp 76-77.