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Occupational health cases of the phlebotomists

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Venipuncture is a current, widely performed medical procedure. Two cases of ergonomics problems associated with work as phlebotomists are reported. The first case was a female veterinarian presented with fibromyalgia of the thumbs due to overuse of hand muscles in practice of compression techniques for venipuncture. The second case was a female presented with urticarial rash of the hands due to a latex allergy from gloves worn in performing venipuncture. Aspects about ergonomics consideration for health care workers are discussed.

Key words: *Venipuncture, Ergonomics, Fibromyalgia, Latex allergy.*

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วิโรจน์ ไววานิชกิจ. กรณีศึกษาทางอาชีวเวชศาสตร์ของบุคลากรทางการแพทย์ที่ทำหน้าที่
เจาะเลือด. จุฬาลงกรณ์เวชสาร 2543 มี.ค; 44(3): 195 - 8

การเจาะเลือดจัดเป็นหัตถการทางการแพทย์ที่มีการปฏิบัติอย่างกว้างขวางโดยทั่วไปในปัจจุบัน ในบทความนี้ได้รายงานกรณีศึกษาด้านอาชีวเวชศาสตร์เกี่ยวกับการปฏิบัติงานบุคลากรทางการแพทย์ในฐานะของผู้เจาะเลือดจำนวน 2 กรณี กรณีแรกเป็นสัตว์แพทย์หญิงมาพบแพทย์ด้วยอาการปวดที่บริเวณนิ้วหัวแม่มือของมือทั้งสองข้าง เนื่องจากการทำงานมากเกินไปในขั้นตอนการกดเส้นเลือดเพื่อการเจาะเลือด สำหรับกรณีที่สองเป็นผู้ป่วยหญิงที่มาพบแพทย์ด้วยอาการของผื่นลมพิษที่มือทั้งสองข้างเนื่องจากอาการแพ้ภายหลังจากการสวมถุงมือพลาสติกเพื่อทำการเจาะเลือด ทั้งนี้ได้อภิปรายเกี่ยวกับแง่มุมเกี่ยวกับความสำคัญทางด้านอาชีวเวชศาสตร์สำหรับบุคลากรทางการแพทย์โดยทั่วไปในบทความนี้

Venipuncture⁽¹⁾ is a basic medical procedure practiced throughout the world and numbers of medical personnel act as phlebotomists. As for other occupations, ergonomics for phlebotomists should be considered. Although the most common occupational health problem when practicing venipuncture is contact with medical specimens and needle stick injuries⁽²⁾ there are also other interesting risks. Two cases presented with ergonomic health problem associated with phlebotomy are discussed in this report.

Case reports

Case 1

A 55 year old female veterinarian who worked as a phlebotomist presented to the physician with the complaint that for a month she felt pain in her thumbs and the symptom was aggravated when she moved her wrists. Prior to this she had been in good health and had no history of underlying disease. Physical examination revealed swelling and tenderness of both thumbs. A limitation of movement of the thumbs could be detected. She stated that on work days she had to perform compression techniques for jugular venipuncture of cattle. She had previous medical and physical therapy but the symptoms had not improved. The patient was treated with steroid injections and the symptoms improved.

Case 2

A 35 year old female laboratory medical technician presented with a history of urticarial eruptions on both hands that developed suddenly after wearing rubber gloves during venipuncture. No other systemic symptoms were noted. Every time she wore the rubber gloves to perform venipuncture the

symptoms developed. This patient was treated with antihistamine and steroid paste and the symptoms improved.

Discussion

The ergonomics aspects of health care workers is a currently interesting topic. Although occupational health is widely discussed, the health care workers who provide the health services to the people seem to be a forgotten group. In this article, two cases of occupational health problems of phlebotomists were presented. As venipuncture is widely practiced in every health center, determining health problems related to venipuncture procedures should be conducted.

In the first case, soft tissue injury due to overuse was discussed. Venipuncture is a manual medical procedure where hand muscles should not be rigorously used. But when there are a lot of venipuncture requests per day, soft tissue trauma to the hand of the practitioner can occur. In this case, the patient was a veterinarian, another medical professional that had to deal with venipuncture frequently. Compression techniques for jugular venipuncture seems to be a rigorous phlebotomy technique and the practitioner must stretch his/her fingers so much that fibromyalgia can easily occur over time. This is not so serious a problem but it seems largely forgotten by physicians. This problem is not rare but few are concerned with it compared to other well-recognized soft tissue injuries such as tennis elbow. Proper posture of health care workers while working should be of concern.^(3,4)

The second case was latex allergy^(5,6) manifested as contact urticaria after exposure to latex

gloves. The disorder was described by Nuttler⁽⁵⁾ in 1979 as having a wide range of symptom from urticaria to anaphylaxis. Health care workers seem to be the population most at risk for this disorder as wearing gloves is during venipuncture a universal precaution. Medical personnel who have to practice venipuncture, a blood related medical procedure, have to follow the universal precautions strictly, therefore, their risk for this problem can be high. Awareness about this problem is very important. In cases where latex allergy is definitely identified, using polyethylene or non-rubber gloves is recommended.⁽⁷⁾ Performing skin tests for possible allergies is recommended for a definite diagnosis.

Ergonomics for health care workers should not be overlooked as they encounter many bio and chemical hazards every day. The problems of health care workers not only phlebotomists but also workers in other clinics, should be studied. If the health of the health care workers is not good, good health service for the people can not be expected.

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