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TEACHING GENERAL PRACTITIONERS WITH VASCULAR PATHOLOGY CASES

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Abstract

Training GPs with real-life cases is evidence-based teaching. It is a powerful tool not only to manage uncertainty in general practice and to increase decision-making capacity but also to enhance quality of care, timely diagnosis, improved prognosis and survival of the patient and avoiding preventable deaths. In teaching with cases, co-operation between the general practitioner and other medical professionals acquires new dimensions, especially when targeting higher expertize. Using real-life cases is important both for presenting interesting difficult to interpret and ambiguous cases, as well as for the subsequent discussion and analysis, which usually goes beyond one or more differentiated medical specialties. We present three vascular cases as well as key points for discussing them: case 1 with aortic atherosclerosis of the aorta and left-artery artery and occlusion of the right artery; case 2 with deep venous thrombosis of the lower leg; case 3 of rupture of abdominal aneurysm. In conclusion teaching with vascular cases is not only an important part of the training of students and postgraduates to acquire a specialty in General practice/Family medicine, for continuing medical education of working physicians, but saves life and contributes to better quality of life

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General Practitioners, Vasculary Paathology, Education

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Introduction

Training GPs with real-life cases is evidence-based teaching. It is a powerful tool not only to manage uncertainty in general practice and to increase decision-making capacity but also to enhance quality of care, timely diagnosis, improved prognosis and survival of the patient and avoiding preventable deaths. In teaching with cases, co-operation between the general practitioner and other medical professionals acquires new dimensions, especially when targeting higher expertize. Using real-life cases is important both for presenting interesting difficult to interpret and ambiguous cases, as well as for the subsequent discussion and analysis, which usually goes beyond one or more differentiated medical specialties.

Purpose

To contribute to better patient care through teaching General practitioners with vascular cases.

Method

Selected vascular clinical cases, teaching with cases method.

Findings and Discussion

Cardio-vascular pathology is a leading cause of death worldwide. Especially vascular pathology contributes to reduced life expectancy, quality of life and need of long term and/or palliative care. That is why teaching vascular pathology and vascular emergencies to General practitioners is very important. Special attention should be given to GPs in low and middle-income countries (Beckman et al., 2010).

We present three vascular cases as well as key points for discussing them: case 1 with aortic atherosclerosis of the aorta and left-artery artery and occlusion of the right artery; case 2 with deep venous thrombosis of the lower leg; case 3 of rupture of abdominal aneurysm.

Case 1

Patient, female, 45 years old with history of complaints as following:

for one year low back pain and tingling in both feet, interpreted as a result of overwork;

for six months the complaints are complaints are growing more in the right leg. Afer GPs consultation discopathy was diagnosed and treated with peroral and local NSAIDs. Due to not responding to treatment MRI was performed and lumbal ostheohondrosis and radiculopathy L4-5 on the right were revealed. After consultations with neurologists and neurosurgeon no operative intervention or therapy were suggested, the pain, paresthesis and decrease skin temperature were interpret as originated from the neurological pathology;

for one month constant 24-hour pain in the right leg, and the appearance of trophic wounds on all 5 fingers, a shortened claudication distance of 30 meters. A friend suggested to visit o vascular surgeon.

Diagnosis was made immediately: Obliterating atherosclerosis of the aorta and left a. iliaca and occlusion of the right artery. Comorbidities: ischaemic heart disease and radiculopathy L4-5.

Absent pulsations on the whole ileo–femoral axis on right and present pulsations on food arteries on left; ABI – L-0,7,5; D – 0,4 , Doppler sonography, arteriography, CT, routine laboratory tests (mild leukocytosis) .

Treatment: Aorto- bifemoral bypass, vasodilating drugs, anticoagulants, reanimation.

Results:: warm low extremities, no temperature difference, healing wounds on right leg fingers, , palpable pulsations on right a. poplitea, compensated collateral circulation, palpable pulsations on the left arteries on the footл ABI L-0,8 ; D-0,6,5.

We would like to point on only two but crucial questions for discussion:

From the anamnesis - is there any question about the claudication distance?

Regarding the clinical examination - Were palpated pulsations of the arteries on all predilection sites during the physical exam? Was skin temperature measured by the physician? Was ABI investigated?

Cases of acutely ischaemic limb should be in-time recognized in general practice. Usually pain, paraesthesia, pallor, perishing with cold are presented, the limb is pulseless with reduced power. Checking pulse on all places for palpation is crucial. This condition is vascular surgical emergency and should be quickly recognized and referred to vascular surgeon. Guidelines target rapid reperfusion of the ischaemic limb, because the prognosis depends on it (Delavari et al., 2016; Graham, 2007).

Case 2

Patient, male 73 years old when going to work falls and hits his face and head. The GP considered just trauma, instead of patient history of complaints of severe pain and swelling in the left leg during the last night. His son insisted on referral to vascular surgeon because of the swollen leg and movement difficulties. The patient had similar complaints of swollen leg, accompanied with cough and fatigue 6 months ago. Physical examination reveals warm extremities and palpable pulsations on all predilection places, left swollen leg (circumference difference 3,5 cm) with subfascial tension Homans positive (+). Doppler sonography, routine laboratory tests, consultations with cardiologist and pulmonologist. Deep venous thrombosis of the leg was diagnosed. Arterial hypertension and ischaemic heart disease as comorbidity. Therapy with anticoagulation drugs, pain relief, legs in a *declive position*, immobilization.

Two questions should be discussed:

Why the General practitioner did not pay attention to the previous night episode of pain and swollen leg?

Was the physical examination of the patient precise?

Beckman defines DVT as public health concern because of considerable morbidity and mortality. DVT can occur in all races and ethnicities, all age groups, and both genders (1, 3). GPs are facing problems to diagnose it. Attention should be given to swelling in the leg, rarely in both legs; pain and cramping; red or discolored skin, feeling of warmth in the leg. An important fact is that DVT could occur without any noticeable complaints or symptoms. GPs need to understand that DVT and pulmonary embolism are a spectrum of the same disease and often co-exist (Kearon, 2014; Scarvelis & Wells, 2006; Wells, Anderson, 2013; Zoubian et al., 2017).

The alarming symptoms are breathlessness, pleuritic chest pain, cough, haemoptysis, syncope (indicative for major PE). For general practice purpose is also important to determine risk factors and to assess the risk. Diagnostic algorithm should be used. This case proves that learning and understanding more about the symptoms of VTE, and raising awareness of GPs has potential to prevent and reduce death and morbidity from deep vein thrombosis and pulmonary embolism.

Case 3

Patient, male 62 years old with ischaemic stroke 16 years ago, acute myocardial infarction, arterial hypertonia, hemiparesis incomplete, cerebrovascular disease, chronic renal failure visited his GP two days after abdominal pain. He was referred to nephrologist because of suspected renal cyst. Hypovolemic shock occurred on the next day morning, tumor formation was palpated on the physical examination and the CT angiography visualized ruptured abdominal aneurism 15,8 cm/13,2 cm. Emergency surgery (aorto-pulmonary by-pass) in cardiovascular clinic was performed., followed by antibiotics, anticoagulants, vasodilatators, blood transfusion, reanimation.

Questions

To clarify from when is the abdominal pain and if periodicity is observed

Was abdominal palpation performed by the general practitioner?

Rupture of aortic aneurism is related to >75% mortality and 50% operative mortality. Ruptured or leaking abdominal aortic aneurysm usually presents with severe back pain or abdominal pain. Attention to history of collapse (often with brief recovery) should be paid. Palpable large pulsatile mass in the abdomen is a great concern and suggests possible aortic abdominal aneurysm. Recognizing main risk factors (Alvarez et al., 2017; Bravo-Merino et al., 2017; Eckstein et al., 2009; Salcedo et al., 2014; Siso-Almirall et al., 2013; Svensjö et al., 2014) could help GP to made the correct diagnosis. Accordingly to the guidelines the only definitive management of these patients is early surgery in a highly specialized cardio-vascular clinic.

Conclusion

Teaching with vascular cases is not only an important part of the training of students and postgraduates to acquire a specialty in General practice/Family medicine, for continuing medical education of working physicians, but saves life and contributes to better quality of life .

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