P18 HEMOPTIZA SA UGLA BRONHOLOGA U OKVIRU OPŠTE BOLNICE

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UVOD

Hemoptiza je iskašljavanje krvi iz disnog sistema. To je zabrinjavajuci simptom i ujedno klinički znak koji najcešce odvodi pacijenta lekaru. Masivna (obilna) hemoptiza je iskašljavanje preko 600 ml krvi (otprilike količina koja odgovara jednoj posudi koja ima oblik bubrega, tzv bubrežnjak) za 24 h. Iskašljaj protkan krvlju je prilicno čest i vecinom nije ozbiljan nalaz. Iskasljaj sa primjesama krvi moze biti posledica infekcije ali i ozbiljnijeg procesa, tako da svakako zahteva dijagnostičku obradu kako bi se otkrilo sta stoji u podlozi njegove pojave. Uzroci hemoptizija u 20% su tumori, posebno karcinom pluca. U pusača starijih od 40 godina sa hemoptizom, lekari traze rak pluca čak i kada je iskasljalj samo protkan krvlju. Plucni infarkt moze takodje uzrokovati hemoptizu. Endoskopski pregled je osnovni i doktrinarni postupak kod pacijenta koji prijavi hemoptizu u pneumoftiziolosku ambulantu bolnice opsteg tipa. Embolizacija bronhalnih arterija je postala glavna metoda koja uspjesno zaustavlja obilne hemoptize u do 90% slucajeva. Hitna hirurska intervencija je indicirana kod obilnih hemoptiza koje nije moguce zaustaviti rigidnom bronhoskopijom niti embolizacijom i opste pretstavlja zadnju mogucnost. Lečenje oskudnije hemoptize je usmereno na uzrok. Krvarenje usled mitralne stenoze ili srčane dekompenzacije drugog uzroka, obicno reagira na specifičnu kardiolosku terapiju. Krvarenje zbog plucne embolije retko je obilno (masivno) i gotovo uvek se spontano zaustavlja. Ako dodje do recidiva embolije a krvarenje i dalje traje, antikoagulantna terapija moze biti kontraindicirana, a terapijski izbor je postavljanje filtra u donju suplju venu. Buduci da je krvarenje iz bronhiektazija obično posljedica infekcije, bitno je sprovesti odgovarajucu antibiotsku terapiju i polozajnu drenazu.

CILJ

Cilj rada je pregled bronhoskopskih nalaza kod pacijenata koji su dali anamnesticki podatak o iskasljavanju krvavog sekreta ili ciste krvi (bez obzira na kolicinu), a koji su imali urednu radiografiju (na radiografiji grudnog kosa nisu bile uocene patoloske promene plucnih polja, medijastinuma, srcane siluete ili toraksnog zida).

MATERIJALI I METODE

Izvrsena je retrospektivna analiza 3140 bronhoskopskih izvestaja sa protokola pulmoloske ambulante Gradske opste bolnice "8-mi septemvri" i Dispanzera za plucne bolesti i tuberkulozu bivse Vojne bolnice u Skoplju. Razmatran je period od 40 godina (1983-2023). U obradu su uzeti izvestaji gde je indikacija za endoskopski pregled bila dijagnoza hemoptiza – sifra po ICD-u R04.2- krvav ispljuvak (Haemoptysis).

Iskljucivo retko smo nalazili druge sifre sa indikacijom za bronhoskoski pregled, kao: R04 krvarenje iz disjnih puteva (Haemorrhagia tractuum respiratoriorum), R04.1 krvarenje iz zdrela (Haemorrhagia pharyngis), R04.8 krvarenje iz drugih delova disajnih puteva (Haemorrhagia partium tractuum respiratoriorum aliarum) i R04.9 krvarenje iz disajnih puteva, neoznaceno (Haemorrhagia partium tractuum respiratoriorum non specificata). Razmotreni su samo slucajevi koji su imali uredan radioloski nalaz (radiografija grudnog kosa u okviru fizioloskog nalaza za odredjenu dobrnu uzrast, bez uocenih patoloskih parenhimskih ili medijastinalnih promena u smislu konsolidacije/ infiltracije, slobodnih frenikokostalnih sinusa, srcana silueta sa sacuvanim kardiotoraksnim indeksom i bez promena na zidu grudnog kosa). Uzrast se kretala od 18 do 88 godina. Endoskopski pregled je kod svih bio uradjen fleksifilnim instrumentom (marke Olympus i Stortz) u lokalnu anesteziju. Pregled je izvodjen u skladu sa standardima i normativima. Premedikaciju apaurinom ili atropinom smo retko primenili. Intubacija je u najvecem broju bila transnazalna (u manjem broju oralna, a iskljucivo retko preko trahealnog tubusa).

REZULTATI

Endoskopske nalaze smo razvrstili i podelili u sledece grupe – Difuzni krvni podlivi po sluzokozi N 140 (4.5%) – Jednostrana hemoragija (naslage krvi ili ugrusaka po sluzokozi) N 310 (10%) – Minimalni nalaz krvavog sadrzaja (tačkasti krvni podlivi jednostrano ili obostrano) – N 316 (10%) – Krvarenje iz gornjih disajnih puteva (slevanje krvi i krvavog sadrzaja u traheji i bronhije) – N 248 (8%) – Hiperemija, edem, pojačana vulnerabilnost bronhalne sluzokoze (nisu nadjeni tragovi krvi) – N 810 (26%) – Normalan nalaz (nalaz u okviru fizioloskog, otsustvo patoloskog supstrata, nisu vidjeni tragovi krvi – nalaz se uklapa u fizioloski za dobnu uzrast) – N 1306 (41.5%) – Anatomski varijetet bronhalnog stabla (laznopatoloski nalaz – prekobrojna ili nedostatak usca na mestu anatomskog polozaja, atrezije i slepi zavrsetci segmentalnih/ subsegmentalnih grana) – N 8 (0.2%) – Endoskopski nalaz infiltracije bronhalne sluzokoze (nalaz visoko suspektan za maligne promene) - N 2 (0.06%) – kod ova dva pacijenta je uzeta biopsija i histoloski je potvrdjena bronhogena neoplazma (NSCLC). Rezultati ovog ispitivanja su pokazali da je najveci broj pacijenata sa anamnezom o hemoptizijama imao uredan bronhoskopski nalaz. Radilo se o hemoptizi manjeg obima. Uzimajuci u obzir anatomiju i fiziologiju plucnog krvotoka, najveci deo krvi u plucima (oko 95%) cirkulira kroz plucne arterije u kojima je pritisak nizak i zavrsava u plucnu kapilarnu mrezu gde dolazi do izmene gasova. Oko 5% krvi koja dospeva u pluca cirkulira kroz visokopritisačni sistem bronhijalnih arterija koje su ogranci aorte i koje snabdevaju velike bronhe i potporna tkiva (nutritivni krvotok). Kod hemoptiza krv po pravilu potiče iz bronhijalnog krvotoka, osim u slučaju ostecenja plucnih arterija. Dobiveni rezultati upucuju na to da kod hroničnih bronhopulmonalnih stanja česce dolazi do stvaranja anastomoza (komunikacije bronhijalnih-sistemskih i pulmonalnih kapliara) koje krvare usled upale ili mikroozljeda, pri cemu se krv sakupi i iskaslje.

ZAKLJUČAK

Pacijentima sa anamnezom o iskasljavanju krvi ili krvavog sekreta u kojih je radiografski nalaz u okviru fizioloskog, apsolutno indikovati endoskopski pregled. Bronhoskopski pregled kod hemoptize uzeti za doktrinarni stav sa gledista pneumoftiziologa-bronhologa i u okviru opste bolnice, bez obzira na okolnosti ili drugih mogucih uzroka. Radiografski i endoskopski nalaz u okviru fizioloskog za starosnu dob ne isključuje mogucnost intrapulmonalnih uzroka hemoptizija. Sistemsko pulmonalne arterijske komunikacije su najčesti uzrok hemoptizija. Endoskopski nalaz hiperemije i minimalnih krvnih podliva, te vulnerabilnost bronhalne sluzokoze, nije dao dovoljnog objasnjenja o uzroku. Shodno tome, kod recidivirajuce hemoptize su indikovani dalji dijagnostičko interventni postupci kao i prosireni hematoloski paket istrazivanja.

KLJUČNE REČI

Hemoptiza, bronhoskopija, krvav iskasljaj, bronholog

P18 HAEMOPTYSIS FROM THE POINT OF VIEW OF A BRONCHOLOGIST IN THE FRAMEWORK OF A GENERAL HOSPITAL

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INTRODUCTION

Hemoptysis is the coughing up of blood from the respiratory system. It is a worrying symptom and at the same time a clinical sign that most often leads the patient to the doctor. Massive (abundant) hemoptysis is the coughing up of over 600 ml of blood (approximately the amount that corresponds to one kidney-shaped vessel, the so-called kidney) in 24 hours. Coughing up blood is quite common and is usually not a serious finding. Cough with admixtures of blood can be the result of an infection or a more serious process, so it definitely requires diagnostic workup to find out what is behind its appearance. The causes of hemoptysis in 20% are tumors, especially lung cancer. In a smoker over 40 with hemoptysis, doctors look for lung cancer even when the cough is only blood-tinged. Pulmonary infarction can also cause hemoptysis. Endoscopic examination is a basic and doctrinal procedure in a patient who reports hemoptysis to the pneumophthisiology clinic of a general hospital. Bronchial artery embolization has become the main method that successfully stops profuse hemoptysis in up to 90% of cases. Urgent surgical intervention is indicated for profuse hemoptysis that cannot be stopped by rigid bronchoscopy or embolization and generally represents the last possibility. Treatment of scantier hemoptysis is directed at the cause. Bleeding due to mitral stenosis or cardiac decompensation from another cause usually responds to specific cardiological therapy. Bleeding due to pulmonary embolism is rarely profuse (massive) and almost always stops spontaneously. If the embolism recurs and the bleeding continues, anticoagulant therapy may be contraindicated, and the therapeutic choice is the placement of a filter in the inferior saphenous vein. Since bleeding from bronchiectasis is usually a consequence of infection, it is important to carry out appropriate antibiotic therapy and local drainage.

OBJECTIVE

The aim of the work is to review the bronchoscopic findings in patients who gave anamnestic information about coughing up bloody secretions or clear blood (regardless of the amount), and who had a normal radiograph (no pathological changes in the lung fields, mediastinum, cardiac silhouette or in the chest wall were no observed on the chest radiography).

MATERIAL AND METHODS

A retrospective analysis of 3140 bronchoscopic reports from the protocols of the pulmonology clinic of the City General Hospital “8-mi Septemvri” and the Dispensary

for Lung Diseases and Tuberculosis of the former Military Hospital in Skopje was performed. A period of 40 years (1983-2023) was considered. Reports where the indication for endoscopic examination was the diagnosis of hemoptysis – ICD code R04.2 – bloody sputum (Haemoptysis) were taken into consideration. We rarely found other codes with an indication for a bronchoscopic examination, such as: R04 bleeding from the respiratory tract (Haemorrhage tractuum respiratoryorum), R04.1 bleeding from the pharynx (Haemorrhage pharyngis), R04.8 bleeding from other parts of the respiratory tract (Haemorrhage partium tractuum respiratoryorum aliarum) and R04.9 bleeding from the respiratory tract, unspecified (Haemorrhagia partium tractuum respiratoryorum non specificata). Only cases that had normal radiological findings were considered (chest radiograph within physiological findings for a given age, without observed pathological parenchymal or mediastinal changes in terms of consolidation/infiltration, free phrenicocostal sinuses, cardiac silhouette with a preserved cardiothoracic index and no changes in chest wall). The age ranged from 18 to 88 years. Endoscopic examination was performed in all patients with a flexible instrument (Olympus and Stortz brands) under local anesthesia. The review was performed in accordance with standards and norms. Premedication with apaurin or atropine was rarely used. Intubation was mostly transnasal (oral in a smaller number, and only rarely through a tracheal tube).

RESULTS

We classified and divided the endoscopic findings into the following groups – Diffuse hemorrhages on the mucous membrane N 140 (4.5%) – Unilateral hemorrhage (deposits of blood or clots on the mucous membrane) N 310 (10%) – Minimal finding of blood content (punctate bruises on one or both sides) - N 316 (10%) – Bleeding from the upper respiratory tract (pouring of blood and bloody contents in the trachea and bronchi) – N 248 (8%) – Hyperemia, edema, increased vulnerability of the bronchial mucosa (no traces of blood were found) – N 810 (26%) – Normal finding (finding within the physiological range, absence of pathological substrate, no traces of blood were seen – the finding fits into the physiological range for the age group) – N 1306 (41.5%) – Anatomical variety of the bronchial tree (false pathological finding – excessive or lack of mouth at the anatomical location, atresia and dead ends of segmental/subsegmental branches) – N 8 (0.2%) – Endoscopic finding of infiltration of the bronchial mucosa (a finding highly suspicious for malignant changes) – N 2 (0.06%) – biopsies were taken in these two patients and bronchogenic neoplasm (NSCLC was histologically confirmed). The results of this study showed that the largest number of patients with a history of hemoptysis had normal bronchoscopic findings. It was a minor hemoptysis. Taking into account the anatomy and physiology of the pulmonary blood flow, most of the blood in the lungs (about 95%) circulates through the pulmonary arteries where the pressure is low and ends up in the pulmonary capillary network where gas exchange occurs. About 5% of the blood that reaches the lungs circulates through the high-pressure system of the bronchial arteries, which are branches of the aorta and which supply the large bronchi and supporting tissues (nutritional blood flow). In hemoptysis, as a rule, the blood originates from the bronchial bloodstream, except in the case of damage to the

pulmonary arteries. The obtained results indicate that in chronic bronchopulmonary conditions, the creation of anastomoses (communication of bronchial-systemic and pulmonary capillaries) that bleed due to inflammation or microinjury, during which the blood collects and drains out, often occurs.

CONCLUSION

patients with a history of coughing up blood or bloody secretions, in whom the radiographic findings are within the physiological range, absolutely indicate endoscopic examination. Bronchoscopic examination in hemoptysis should be taken as a doctrinal position from the point of view of a pneumophthisiologist-bronchologist and within a general hospital, regardless of the circumstances or other possible causes. Radiographic and endoscopic findings within the physiological framework for age do not exclude the possibility of intrapulmonary causes of hemoptysis. Systemic pulmonary arterial communication is the most common cause of hemoptysis. The endoscopic finding of hyperemia and minimal blood vessels, as well as the vulnerability of the bronchial mucosa, did not provide a sufficient explanation of the cause. Consequently, in case of recurrent hemoptysis, further diagnostic interventional procedures are indicated, as well as an expanded hematological research package.

KEYWORDS

Hemoptysis, bronchoscopy, bloody expectoration, bronchologist