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REDAKSIE

PYN IN DIE BORS

Die vraagstuk van borspyn is onlangs bespreek by 'n samespreking wat aan die Mayo Clinic[1] gehou is. Die ingewikkeldheid van hierdie onderwerp is duidelik uit die groot aantal oorsake wat aanleiding kan gee tot pyn in die bors—die pyn kan ontstaan uit die senuwees, spierskelet, hartbloedvate, slukderm, middelvlies, borsvlies, longe, middelrif, en uit die organe van die buik. 'n Paar punte uit die 5 referate wat by die samespreking gelewer is sal hier bespreek word; die oorspronklike artikels behoort egter in geheel gelees te word.

Beserings binne-in die rugmurg veroorsaak nie gewoonlik pyn nie; wanneer die pyn wel voorkom, is dit meer waarskynlik die gevolg van druk op die agterwortelvesels as van irritering van die rugmurgbane. Irritering van die agterwortels is 'n algemene oorsaak van pyn in die bors en kan aan verskeie kondisies gewyt word, wat dan ook oorweeg moet word: ribbebreuk, samepersing deur 'n gewas, 'n uitgesakte skyf, 'n sweer, ontstekingsletsels, bloedvatletsels (slagaarverharding, ontsteking van 'n slagaar-buitewand, tussenwand-slagaarbreuk) en stoornisse in die stofwisseling (suikersiekte, porfiria).

Die algemeenste oorsaak van pyn in die borswand is moontlik spiervermoeidheid en ooreising—miskien die gevolg van ongewone oefening, swak liggaamshouding, of beroep. Dit word dikwels oor die hoof gesien dat pyn in die agterste gedeelte van die borskas veroorsaak kan word deur ontsteking van die epifises van die werwels, wat deur ontaarding gevolg word; dit moet by ouer pasiënte vermoed word. Miëloom is waarskynlik die algemeenste gewas van die borswerwels en moet in gedagte gehou word by pasiënte wat die ouderdom van 45 jaar bereik het. Ettervormende beenontsteking van die werwels is 'n siektetoestand wat vandag meer dikwels uitgeken word.

T. J. Dry bespreek borspyn wat uit die hartbloedvaatstelsel spruit. Die pyn kan te wyte wees aan *plaaslike bloedloosheid van die hartspier* weens kroonslagaarsiekte, hoewel letsels van die aorta ook die oorsaak kan wees. Akute hartspierverstopping kan die eerste teken van kroonslagaarsiekte wees met die beklemmingspyn uitgestraal na die maagkrop (,akute slegte spysvertering'). Ook kan kwaai aanvalle voorkom wat paar uur duur en wat gepaard gaan met die verskynsels van ernstige skok; by ander gevalle is daar kwaai dispnee sonder enige pyn (miskien net 'n ligte brandende gewaarwording), met of sonder tekens van akute linker-

EDITORIAL

THORACIC PAIN

In a symposium recently held at the Mayo Clinic[1] the question of thoracic pain was discussed. The complexity of the subject is revealed by the numerous causes of pain in the thoracic region, from neural, musculo-skeletal, cardiovascular, oesophageal, mediastinal, pleural, pulmonary, diaphragmatic, and abdominal structures. A few points from the 5 papers presented at the symposium are considered here; the original articles should be read in full.

Intramedullary lesions of the spinal cord do not usually produce pain; when pain does occur it is more likely to be the result of pressure on dorsal root fibres than of irritation of intramedullary tracts. Irritation of the dorsal roots is a common cause of thoracic pain and may be due to a variety of conditions, which have to be considered: rib fracture, compression by tumour, prolapsed disc, abscess, inflammatory lesions, vascular lesions (arteriosclerosis, periarteritis, dissecting aneurysm) and metabolic disturbances (diabetes, porphyria).

The commonest cause of pain arising in the chest wall is possibly muscle fatigue and strain, the result perhaps of unaccustomed exercise, poor posture, or occupation. In the posterior part of the chest epiphysitis of the vertebral bodies followed by degenerative changes is frequently overlooked as a cause of pain; it should be suspected in elderly patients. Myeloma is probably the commonest tumour of the thoracic vertebrae and should be suspected in patients who have reached the age of 45 years. Pyogenic osteitis of the vertebrae is a condition that is coming to be recognized more frequently.

Thoracic pain of cardiovascular origin is discussed by T. J. Dry. The pain may be due to *myocardial ischaemia* from disease of the coronary arteries, although aortic lesions may also be the cause. Acute myocardial infarction may be the first indication of coronary disease, with anginal pain referred to the epigastrium ('acute indigestion'), or severe seizures may occur lasting many hours and associated with features of severe shock; in other cases there is severe dyspnoea,

kamerversaking. Ook kan borspyn deur *irritering van die hartsak* veroorsaak word, maar ontsteking van die hartsak kan ook sonder pyn voorkom. Wanneer pyn wel voorkom, kan dit tot 'n bepaalde streek beperk wees (onder die borsbeen, om die hart, op die krop van die maag, of onder die blaaie), of dit kan tot die nek en selfs die arms uitstraal. In teenstelling met die elektrokardiografiese beelde van hartspierverstopping, is daar nooit 'n daling van die RS-T segment nie, en daar is ander belangrike onderskeidende verskynsels. Sekere siektes van die *aortaboog-stelsel* veroorsaak pyn, en verskeie meganismes kan daarby betrokke wees. 'n Tussenwand-slagaarbreuk van die aorta kan dus pyn veroorsaak wat nie onderskei kan word van die pyn van hartspierverstopping nie, en dit moet vermoed word as herhaalde elektrokardiogramme bv. onveranderd bly. Hoofslagaarbreuk word vandag maar selde gesien omdat sifilis so doeltreffend op vroeë stadium behandel word.

Verskeie toestande kan slukdermpyn veroorsaak. Dit mag angina pectoris naboots maar staan nie altyd in verband met slukmoeilikheid nie. Hoewel hierdie pyn gewoonlik onder die borsbeen setel, kan dit na die nek en gesig, die skouers, die arms, of die rug versprei. Die pyn van 'n hiatus-breuk kan kroonslagaargebrek naboots. Gewasse van die slukderm of van die middelvlies veroorsaak nie gewoonlik pyn nie tensy ander organe daarby betrokke raak.

Die long en sy oortreksel, die longborsvlies, is ongevoelig vir pyn. Daar is dus sekere soorte longletsels wat nie noodwendig met pyn gepaard gaan nie. Pyn weens longletsels word veroorsaak as naburige organe in die gedrang kom—borswand, middelrif, die lugpyp en sy vertakkings—of deur bloedvaatkramp, of verplasing van die ingewande.

Pyn weens verspreide vaatkramp word hoofsaaklik veroorsaak deur propvorming of drukverhoging in die longbloedvate. Sommige mense meen dat die vrystelling van 5-hidroksitriptamien 'n rol speel by die eerste kondisie.[2] Die pyn van drukverhoging in die longslagare kan baie op angina pectoris lyk, maar kan gewoonlik nie met gliseriel trinitraat verlig word nie.

Wat die buikaandoenings betref, het galsteenkoliek, akute alvleesklierontsteking, en perforasie van die buik-organe reeds pyn in die bors veroorsaak wat verkeerdelik aan akute hartspierverstopping toegeskryf is. Die pyn van die bo- en onderkant van die middelrif kan nie onderskei word nie, maar dit is wel moontlik om te onderskei tussen ontsteking van die borsholtevlies oor die middelrif, en inflammasie van die buik-organe.

Baie van die siektes wat pyn in die borsstreek kan veroorsaak is al verkeerdelik aangesien vir akute hartspierverstopping. Dit is belangrik om te besef dat pyn uit die spierskeletstelsel na die arms kan uitstraal, want hierdie simptoom kan aanleiding gee tot 'n verkeerde diagnose van hartsiekte. 'n Noukeurige geskiedenis en ondersoek behoort die juiste oorsaak van die pyn te ontmasker; wanneer die simptome en die bevindings nie ooreenslaan nie, raai Dry aan dat die nadruk liewer op die simptome as op die bevindings gelê moet word.

1. Samespreking (1956): Proc. Mayo Clin., **31**, 1.
2. Van die Redaksie (1956): Lancet, **1**, 240.

with complete absence of pain (perhaps a mild burning sensation), with or without signs of acute left ventricular failure. Thoracic pain may also be due to *pericardial irritation*, but pericarditis can occur without pain. When pain occurs it may be localized (substernal, pericardial, epigastric, or in the scapular region), or it may extend into the neck and even to the arms. In contrast with the electrocardiographic features of myocardial infarction there is no depression of the RS-T segment at any time and there are other important differentiating features. Certain diseases of the *aortic arch system* cause pain and several mechanisms may be involved. Thus dissecting aneurysm of the aorta can produce pain indistinguishable from that due to myocardial infarction and is suspected if, for instance, repeated electrocardiograms remain unchanged. Aneurysm of the aorta is rarely discovered nowadays because syphilis is effectively treated in its early stages.

Oesophageal pain may be due to a variety of conditions. It may simulate angina pectoris and is not always associated with dysphagia. While usually substernal, it may extend to the neck and face, the shoulders, the arms, or the back. The pain of hiatal hernia may simulate coronary insufficiency. Tumours of the oesophagus or of the mediastinum do not usually cause pain unless they involve other structures.

The lung and its covering of visceral pleura are devoid of pain sensation. There are therefore certain types of pulmonary lesion that may not be associated with pain. The pain from pulmonary lesions is due to involvement of adjacent structures—chest wall, diaphragm, trachea or bronchi—to vascular spasm, or to displacement of the viscera.

Pain due to diffuse vascular spasm is produced mainly by pulmonary embolism and pulmonary hypertension. In the former condition the release of 5-hydroxytryptamine has been considered to play a role.[2] The pain of pulmonary hypertension may resemble angina pectoris closely but is generally not relieved by glyceryl trinitrate.

Abdominal conditions such as biliary colic, acute pancreatitis and perforation of the abdominal viscera have caused pain in the chest which has been attributed to acute myocardial infarction. There is no distinction between pain from the upper and lower surfaces of the diaphragm, but it is possible to differentiate diaphragmatic pleurisy from inflammation of the abdominal viscera.

Many of the conditions that may produce pain in the thoracic region have been mistaken for acute myocardial infarction. It is important to recognize that pain from musculo-skeletal structures may extend to the arms, for this symptom may lead to a wrong diagnosis of cardiac disease. A careful history and examination should reveal the true cause of the pain pattern; when the symptoms and findings are incompatible the emphasis, according to Dry, should be placed on the symptoms rather than on the findings.

1. Symposium (1956): Proc. Mayo Clin., **31**, 1.
2. Editorial (1956): Lancet, **1**, 240.