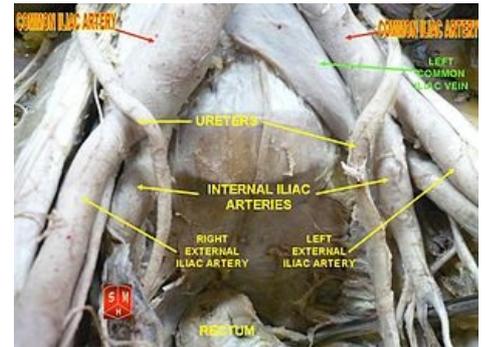


Narrowing and occlusion of the aorta and pelvic arteries

- The lower limbs are the most common site of arterial occlusions;
- **incidence** - 6% of the population over 50, 10% over 60, 4 times more often women;
- **causes** - atherosclerosis is the main, closures in young men can cause Buerger disease;
 - atherosclerotic changes are typically in 3 levels - aortic, femoropopliteal, crural;
- **clinical picture** ;
 - isolated involvement of the aortoiliac region - claudication in the gluteal muscles;
 - complete closure of the caudal aorta - in addition impotence, lack of pulsations in the groin (Leriche's syndrome);
 - femoropopliteal closure - calf claudication;
 - trophic changes are usually only in the case of multiple closure or crural closure (individual closures usually have collateral circulation centrally and this is sufficient to maintain viability);
- choice of therapy - what to consider;
 - severity of the condition and degree of threat to the limb;
 - the degree of vascular involvement and the possibility of effective surgery;
 - overall condition of the patient - about 50% of patients have coronary heart disease, another 20% have damaged coronary heart disease;
 - Acute myocardial infarction is the most common cause of death after aortoiliac reconstruction;
 - we consider surgery for resting pain and trophic changes;
 - claudication - we consider the length of the claudication interval, the overall activity of the patient, his way of life...



common iliac artery

Reconstruction of the aortoiliac region

Endarterectomy

- It is used only rarely in the aortoiliac area.

Bypass

- Method of choice, only vascular prostheses are used;
- most often in the form of a bifurcated aortobifemoral graft (the Y-shaped graft is found above the stenosis into the aorta and below the stenosis into the iliac);
 - the most common place of separation is from the anterior wall between the distance between the renals and the lower mesenteric (least altered part);
- at complete closure - proximal anastomosis end to end with suturing of the caudal part of the severed aorta (simply connect the bypass directly to the aorta);
- retroperitoneal tissues and the back of the peritoneum should always be interposed between the prosthesis and the duodenum (prevention of aortoenteral fistula);
- aortofemoral bypass is typically performed from a long moderate laparotomy (extraperitoneal approach is also possible);
- at one-sided pelvic artery occlusion - extraperitoneal aortofemoral or iliofemoral bypass;
- results - very good, operative mortality 1-2%, immediate bypass function is 95-100%.

Extraanatomical bypasses

- In patients with endangered limbs, when anatomical bypass cannot be established (general condition, previous surgery, infection site);
- **femorofemoral cross-over bypass** ;
 - with a one-sided riverbed closure, the performance is only minimally burdensome;
 - can be performed in LA or in an epidural ;
- **axillofemoral bypass - in bilateral pelvic flow** ;
 - if it is necessary to revascularize both legs - the connection between the femorals is still stretched under the subcutaneous tissue (see picture);
 - long-term function is worse, about 25% of joints require secondary thrombectomy;
- **PTA** - (Percutaneous transluminal angioplasty) suitable for short stenoses of the common or external iliac, it is possible to insert a stent.

Reconstruction of the femoro-popliteal area

- Sufficient inflow and outflow should always be verified (if there is no inflow - then proximal bypass before or simultaneously with the femoro-popliteal, or PTA, if there is no outflow - prolongation of reconstruction, lumbar sympathectomy);
- PTA, endarterectomy, patch patch - short stenoses;
- bypasses - femoropopliteal from the femoral artery to the upper or lower part of the popliteal artery, femoro-crural;
- vascular prostheses (PTFE) - distal to the upper part of the poplitea (if there is sufficient drainage);
- venous grafts - v. saphena magna, or v. cephalica, if the saphenous vein is not long enough - it is sutured distally to the lower part of the popliteal artery (there are no atherosclerotic changes - distal femoro-popliteal bypass is indicated for severe changes to the popliteal artery):
 1. eversion- sewing the saphenous vein inversely (due to the flaps);
 2. in situ - maintaining the normal course, but it is necessary to remove the valves with a valvulotomy;
 3. composite graft - a combination of vein and vascular prosthesis;
- special types of popliteal artery disease;
 - **entrapment syndrome** - anomalous course of the popliteal artery, which is pulled over the beginning of the medial gastrocnemius, stenosis and poststenotic dilatation, clinical claudication, microembolization to critical ischemia, surgical treatment (cut the gastrocnemius medialis head or venous bypass);
 - **cystic adventitial degeneration** - deposition of jelly-like matter between the media and adventitia, narrows the artery and manifests itself in typical claudications, bypass treatment (venous, popliteo-popliteal)

Reconstruction of the crural area

- it is necessary to distinguish between claudication pain (ischemic) pain and pain when the veins are affected:
 1. **phlebothrombosis** - positive Homan's and plantar symptom, edema;
 2. **chronic venous insufficiency** - feeling of heaviness without claudication, swelling, night cramps in the calves;
- the most common cause (especially in men under 40, heavy smokers) is Bürger disease - it manifests itself in the development of trophic defects without a previous claudication stage and migratory phlebitis, diffuse shin artery disease is seen on angiography, treatment includes smoking cessation and prostaglandin infusions;
- reconstructions are performed as an attempt to save the limb, preoperative angiography is necessary, according to which a place for suturing the distal end of the anastomosis is chosen, as the graft is the best v. saphena magna in situ.

References

Related Articles

- Atherosclerosis
- Artery reconstruction
- Chronic ischemic disease of the lower limbs
- Ischemic heart disease
- Large vein occlusion

Source

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