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RESEARCH ARTICLE

**RETROPERITONEAL ILIAC ARTERY ENDARTERECTOMY-A VIABLE ALTERNATIVE TO
 AORTOUNIFEMORAL BYPASS? IN POOR CARDIOPULMONARY PATIENTS.**

Dr. S. Saravanan, Prof. K. Elancheralathan, Prof. G. Thulasikumar and Dr. C. Shanmugavelayutham.
 Dept of Vascular Surgery, Govt.Stanley Medical College , Chennai – 600001.

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Abstract

Introduction: to study the outcome and efficacy of retroperitoneal iliac artery endarterectomy in poor cardiopulmonary function.

Material and methods: this is a prospective study done in 15 patients with critical limb ischemia in the past two and half years (2015– 2017) who underwent extraperitoneal iliac artery endarterectomy with poor cardiopulmonary patients.

Results: fifteen patients underwent extraperitoneal iliac artery endarterectomy in this study. Most of them were males(14/15 – 93%) , with an average age of 63 years (age range 47–82 years). Cardiopulmonary comorbidities in form of ischemic heart disease – were 73%(11/15) and chronic obstructive lung disease – 27%(4/15). All patients were subjected to iliac artery endarterectomy followed by iliofemoral bypass in 73%(11/15) , patch plasty 20%(3/15) and primary closure 7%(1/15). Limb salvage in this study 85%(11/13) and patency 77%(10/13) during followup period of two years. Morality rate in this study 13.3%(2/15) .

Conclusion: thus in selected group of aortoiliac occlusive disease patients with poor cardiopulmonary status retroperitoneal iliac endarterectomy remains one of the effective and safer procedures to consider.

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Introduction:-

Although iliac artery (ia) endarterectomy has largely been replaced by bypass and endovascular options, open endarterectomy continues to play an important role in selected patterns of occlusive disease.(1,2) purpose of the study is to analyse the outcome and efficacy of extraperitoneal iliac artery endarterectomy in poor cardiopulmonary patients.

Material and methods:-

This is a prospective study done in 15 patients with critical limb ischemia in the past two and half years (2015– 2017) in our institution who underwent retroperitoneal iliac artery endarterectomy with poor cardiopulmonary function (all had poor ventricular ejection fraction or severe pulmonary disease). All these patients were not amenable for endovascular approach.

Results and discussion:-

Fifteen patients underwent retroperitoneal iliac artery endarterectomy in this study. Most of them were males (14/15 – 93%), with an average age of 63 years (age range 47–82 years). Cardiopulmonary comorbidities in form of ischemic heart disease – were 73% (11/15) and chronic obstructive lung disease – 27% (4/15).

Table 1:- Characteristics Of Patients Underwent Iliac Endarterectomy

S.no.	Features	Number	Percentage
1.	Mean age (47- 82 years)	63 years	-
2.	Gender: a) male b) female	14/15 1/15	93% 7%
3.	Cardiopulmonary risks: A) ischemic heart disease B) chronic pulmonary obstructive disease C) combined	11/15 4/15 8/15	73% 27% 53%

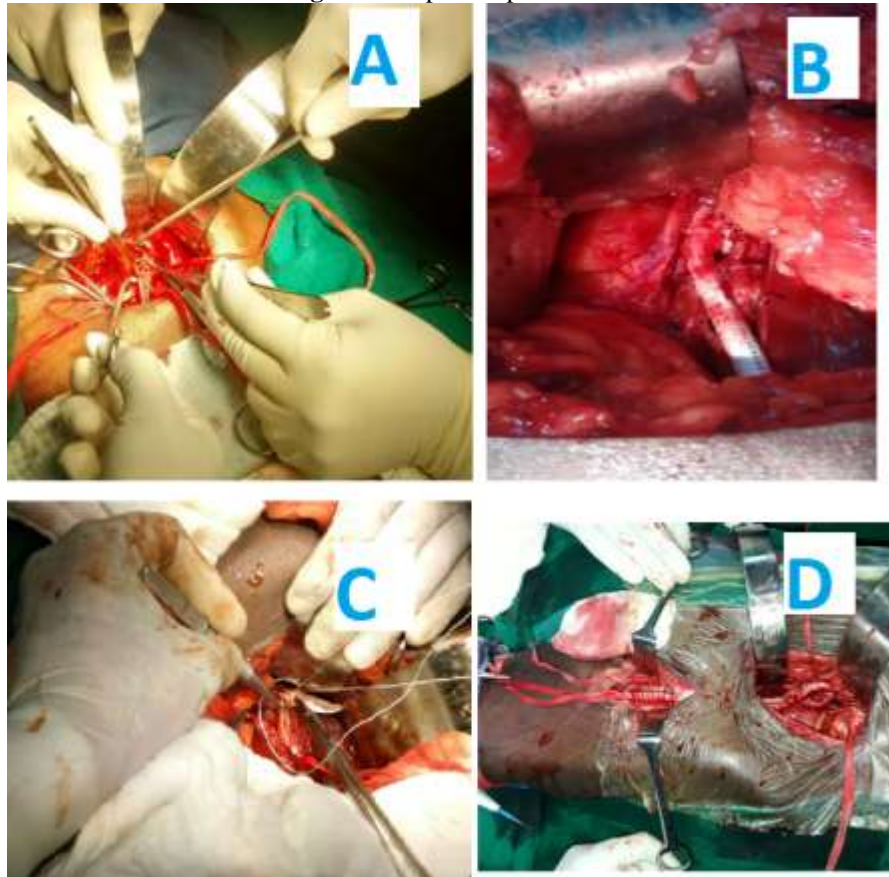
Figure 1:- ct angiograms



Procedure:-

All patients were subjected to iliac artery endarterectomy followed by iliofemoral bypass in 73% (11/15), patch plasty 20% (3/15) and primary closure 7% (1/15). Fifteen endarterectomies were performed and categorized into three groups: (1) combined common iliac artery and external iliac artery endarterectomy (6/15; 40%); (2) external iliac artery endarterectomy (2/15; 13%); and (3) aortic and common iliac artery endarterectomy (n 7; 46%). Surgical adjuncts were performed in complement to these groups of iliac endarterectomy as follows: common femoral artery endarterectomy (9/15; 64%); iliofemoral bypass in 73% (11/15), patch plasty 20% (3/15) and primary closure 7% (1/15). Majority of iliofemoral bypass done after eversion endarterectomy 80% (9/11).

Figure 2:- Oprative procedures



1. Iliac endarterectomy.
2. iliac –graft anastomosis.
3. patch plasty d) iliofemoral bypass.

An advantage of iliac endarterectomy is the variety of additional adjuncts that may be applied during the procedure. In this context, endarterectomy provides operative flexibility, allowing for adjustments to be made according to operative findings; for example, iliofemoral bypass can be performed if the backflow is inadequate.(3-5)

Iliac endarterectomy offers an alternative for managing iliac occlusion, although common iliac artery exposure or a limited bypass may still be required. Further advantages of iliac artery endarterectomy over aortofemoral Bypass include avoiding aortic exposure and crossclamping to reduce cardiac stress. Endarterectomy may improve erectile function by opening stenotic hypogastric artery orifices. Advantages of an extraperitoneal approach include reduced respiratory complications owing to a less painful incision, reduced postoperative ileus, and reduced formation of intra-abdominal adhesions.(6,7,8)

Table 2:- Procedures And Outcome

S.no.	Features	Number	Percentage
1.	Procedures:		
	A) Iliofemoral	11/15	73%
	B) Patch plasty	3/15	20%
	C) Primary closure	1/15	7%
2	Outcomes:		
	A) Limb salvage	11/13	85%
	B) Patency	10/13	77%
	C) Mortality	2/15	13.3%

Limb salvage in this study 85%(11/13) and patency 77%(10/13) during followup period of two years. All the patients with limb salvage were free of rest pain and ulcer. Two had major amputations in form of one below knee and one above knee amputation following graft thrombosis and sepsis.

Mortality rate in this study 13.3%(2/15) , both died of myocardial infarction (one during postoperative day 8 and other during followup period at 4 th month). Similar study by natrajan et al on 2008 shows similar patency(88%) and mortality rates (4.3 %_procedure related mortality)

Conclusion:-

Applied selectively to these group of patients and with the use of surgical adjuncts tailored to the patient’s needs, based on operative findings, endarterectomy continues to provide good long-term patency with limited morbidity and mortality.(9-11)

Thus in selected group of aortoiliac occlusive disease patients with poor cardiopulmonary status extraperitoneal iliac endarterectomy remains one of the effective and safer procedures to consider.

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