ORIGINAL RESEARCH PAPER

General Surgery

ANALYSIS OF PATTERN OF PRESENTATION, RISK FACTORS AND MANAGEMENT OUTCOME IN PERIPHERAL ARTERIAL DISEASES – A RETROSPECTIVE-PROSPECTIVE STUDY.

KEY WORDS:

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INTRODUCTION:

Peripheral artery disease (PAD) is now the preferred term for partial or complete obstruction of ≥1 peripheral arteries.[1]

PAD prevalence and incidence are both sharply age-related, rising >10% among patients in their 60s and 70s.[2]

It is estimated that >200 million people have PAD worldwide, with a spectrum of symptoms from none to severe.[3]

Intermittent Claudication is generally indicative of exercise-induced ischemic leg pain, primarily in the calf, caused by PAD.

Typical noninvasive evaluation is based on hemodynamic measures, such as systolic pressures taken at the ankle or toe and arterial doppler.

Treatment goals includes life style modifications, reducing cardiovascular risk and improving functional capacity. Revascularization, endovascular and open (surgical) repair of arteries is indicated for persistent symptoms,

Need for the study

Peripheral arterial disease and its complications remains as common health problem, despite progress made in the diagnosis and treatment, both medically and surgically.

Peripheral arterial disease has a major impact on health care system both economically and socially.

Risk factors like smoking, hypertension, diabetes, hyperlipidaemia, hyperhomocystinaemia are associated with increased incidence of PAD. As the incidence of PAD is on the rise , there is an increase in complications too.

Early diagnosis and treatment is necessary to prevent morbidity and mortality.

AIM AND OBJECTIVES OF THE STUDY

Analysis of pattern of presentation, risk factors and management outcome in peripheral arterial diseases.

MATERIALS AND METHODS

Retrospective – Prospective Descriptive study.

SOURCE OF DATA

Patients diagnosed with peripheral artery disease, being admitted in BJMC Ahemedabad satisfying the inclusion criteria.

METHOD OF COLLECTION OF DATA

Sample size : 45 patients.

Documents of admitted patients from September 2018 to August 2019 and cases encountered during the period of September 2019 to August 2020 who satisfy the inclusion criteria, admitted in BJMC, Ahemedabad.

Inclusion criteria

All Patients of peripheral arterial disease diagnosed by clinical and imaging methods.

Exclusion criteria

PAD following Trauma.
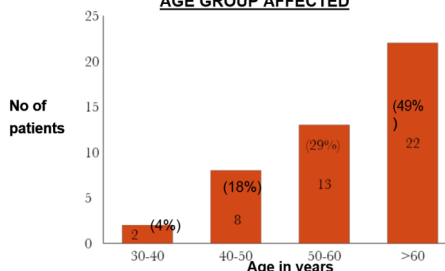Acute limb ischaemia.

Statistical tests:

The collected data was evaluated using appropriate descriptive statistical methods. (mean, percentage and presented with bar and pie charts)
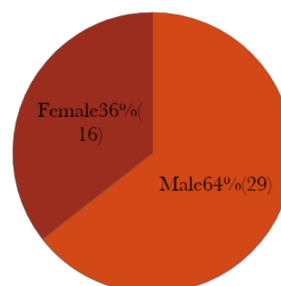
Investigations:

Complete Hemogram
Blood urea, Serum creatinine, FBS, PPBS, HbA1c.
ECG, 2D ECHO
Chest X ray
Lipid profile
Arterial doppler
Angiogram – if indicated (CT or MR angiogram)
X-ray of affected part.
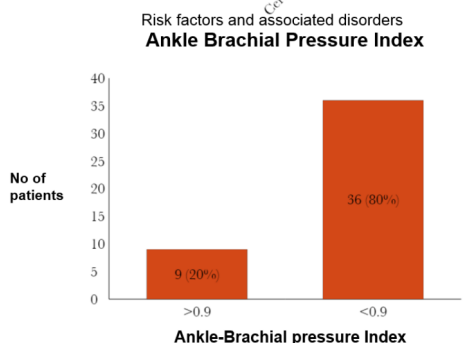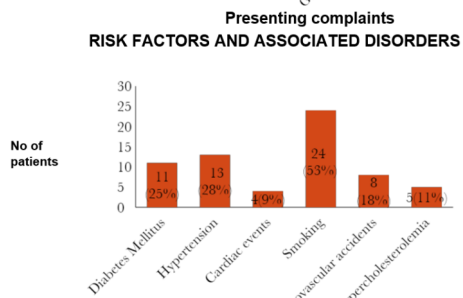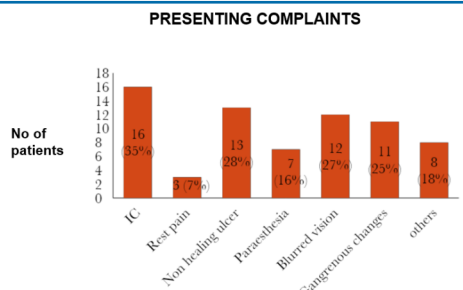Culture sensitivity of the discharge (if any).
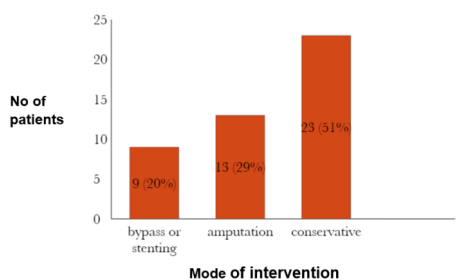Ankle Brachial Pressure Index.

RESULTS

AGE GROUP AFFECTED

Sex distribution

PRESENTING COMPLAINTS

Presenting complaints

RISK FACTORS AND ASSOCIATED DISORDERS

Risk factors and associated disorders

Ankle Brachial Pressure Index

Ankle-Brachial pressure Index

Treatment :

Mode of intervention

Complications : POST SURGERY

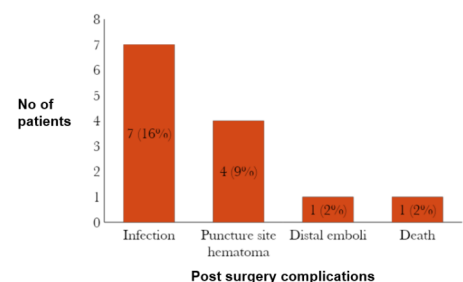Post surgery complications

DISCUSSION :

Our study shows prevalence of PAD increasing with age similar to studies conducted by Criqui MH et al, Hooi JD et al, and most common age group affected is >60 years (Mean being 63.5 years).

Males outnumbered females similar to study conducted by

Kannel WB et al (males > 2 females). Incidence is 1.8 times

among males than female.

Most common presentation is Intermittent Claudication (35%) followed by Non healing ulcer (28%) and Gangrenous changes (25%).

Ankle-Brachial Pressure Index is the simple, non-invasive, economical and reproducible test with 98% accuracy, 97% sensitivity, 100% specificity. (a)

In our study most common risk factor being smoking (53%) followed by hypertension (28%) it was less compared to study conducted by Joosten MM et al and Smith GD et al (smoking 80%).

In our study 27% patient had cerebrovascular/cardiac events similar to study conducted by Criqui MH, Denenberg JO, Langer RD et al where it was 25%.

In our study Diabetes Mellitus was associated with 25% of patients similar to study conducted by Beks PJ et al. (20.9%).

Patients are managed both conservatively (life style modifications, statins, aspirin, Cilastazol) and surgically (bypass graft, revascularisation and amputation).

Most common complication following surgery is infection.

Mortality is seen in 1 patient with co-morbidities following surgery(amputation) compared to study conducted by Dormandy et al.

CONCLUSION :
A holistic patient approach is required in patients presenting with PAD.

For claudicants, the emphasis should be on cardiovascular risk assessment and risk factor control.

Detailed clinical assessment in conjunction with ABPI and arterial doppler will allow decisions regarding treatment to be made. If endovascular or surgical treatment is appropriate then imaging assessment will also be required.

Take home message
With a progressive increase of PAD in our country, cessation of smoking and life style modifications could drastically decrease the incidence.

CONCLUSIONS
There is a strong predictive value of PAD for subsequent all-cause mortality, due to a sharply increased risk of CAD and CBVD mortality. Measurement of ABI is easy to perform, is inexpensive and has high sensitivity and specificity for PAD. This is important because early identification of PAD and aggressive modification of risk factors, including antiplatelet therapy, show great promise for improving the prognosis of patients with PAD.

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