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Prospective data analysis of comorbid condition in patients ofFourniers gangrene in tertiary care hospital ANMMCH, Gaya(Bihar)

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I. Introduction

Fourniersgangrene israpidly progressivesynergistic polymicrobialnecrotisingfasciitisinvolvingperineum,scrotum and penis. Its leads to obliterative endarteritis leading to gangrene of subcutaneous andoverlying skin[1]. The anaerobic bacterial overgrowth in subcutaneous plane leads to formation of hydrogen andnitrogen giving a crepitus feeling[2].The first author who described this disease was Baurienne in 1764[3].Riskfactorsinclude diabetes mellitus (DM), chronic alcoholism, malignant neoplasms and HIV[4]. FG affects allages and both genders[5]with a male preponderance (male: female is 10:1)[6]and although it has a broad agerange, it mainly affects patients over the age of 50 years[7] It is rarely seen in the paediatric age group, and littleis knownaboutthedisease inthenewbornperiodandinfancy[8][9] Themortalityratevariesbetween3%-67%inthepublishedseries.[10]

II. AimsAndObjective

Toanalyzetherelationofcomorbidconditionandmortalityamongfourniersgangrenepatientscomparingwith previouspublisheddatawhoweretreatedinourtertiarycarehospital, anmmchgaya..

III. MaterialAndMethod

All patients of fornier gangrene admitted either in emergency or on outdoor basis in department ofgeneral surgery, anmmch gaya from January 2016 to dec.2019 were included in the study. The diagnosis of FGwas made afterphysical examination, imaging and intra-operative findings, based onthe following criteria1)soft tissue infections with involvement of the scrotum, perineum or perianal areas 2) presence of air infiltratingthesubcutaneoustissue3)clinicalfindingsofgangrenousandnecrotictissue,4)histologicallyprovennecrotis ingfasciitis.

Patientagesex,religion,comorbidcondition,modeoforiginand extent,malignantstatus

History of recent previoussurgery,microbiologicalstatus of tissue, postoperative morbidity andmortalitydata werecollected.Dataanalysisdoneusingsoftware SPSS.

IV. Result

Total 60 patients were treated during the period of January 2016 to Dec.2019. 52 (86.67%)patients were maleand 8 patients were female. Median age was 56 years. Of 60 patients 22 were Hindu,36 were muslim and 2 werechristian.

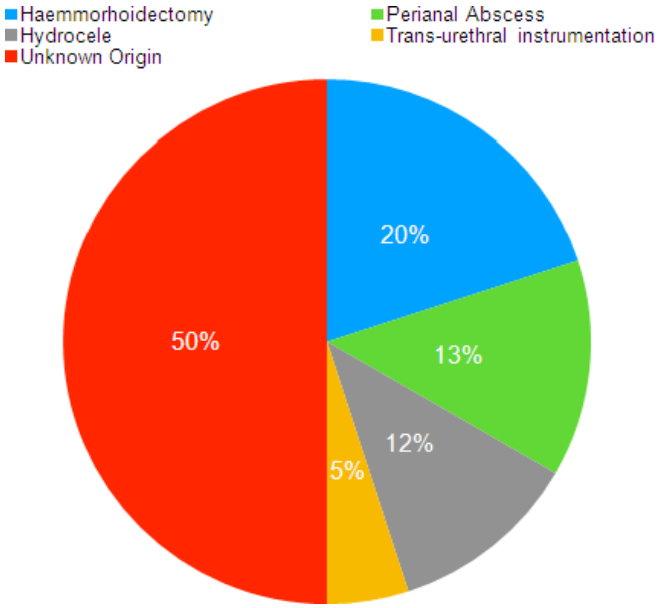
Atotalof46patientswerealcoholic/takingnarcotics.34patientswerediabetic,5patientsweretakingimmunosuppressio ndrugs.table1.

Table1.Comorbidities/RiskFactor	
DiabetesMellitus	34
Obesity/BMI(>30)	38
ChronicAicoholic/NarcoticUse	46

Table1.Comorbidities/RiskFactor	
Immunosuppressiondrugs/immunocompromised	8
NeoplasmActive	2

OfColorectalsurgerypatientunderwentpreviussurgeryofHaemorrhoidectomy(12),perianalabscess(8),hydrocele(7),transurethralinstrumentation(3),InRestofthepatient originwas unknown.
Usgwas performedin6patientstoknowtheextentandunderlyingcollection.

Fig.1 ShowingPercentageoforiginofForniers Gangrene



Patients were treated with serial extensive debridement and dressing, antibiotics were given according to culturereport ,medial stay of patient in hospital was 21 days. Orchidectomy done in 6 patients, Trans urethraslFoleyscatheterizationdonein22patient andsuprapubiccatheterizationdonein2patients.
8 patients were shifted for ICUcare. 22 patients died inspire of care mainly due to Multiple organ disfunctionsyndrome.
Mostcommonlyisolatedpathogenswereanaerobesmostlypepto-streptococciand Bacteroids.InAerobes E-coli(enterobacteriace)were isolatedin32(53.33%),followedby streptococcalinfection.Majority of thepatientshasgotpolymicrobialinfection.

V. Discussion

Forniers gangrene leads to decrease in host cellular immunity, underlying systemic disorder has beenassociated with high mortality among FG patients[11,12]. DM has been found a major risk factor but it does notaffect prognosis[13].But in contrast, Yanar found no increased mortality among diabetic patients.[14].in ourstudy we have found high mortality among Diabetic patients. Chronic alcoholichas been described as a riskfactor for FG with a frequency of 4–66% and has been associated with worse prognosis, especially in thosepatients with DM[15].In our study we found 76% patients were Alcoholic or taking narcotic in different forms.Empirically antibiotics covering gram positive/gram negative and Anerobes should be given.Recent studiesadvisetheadministrationofthird-generationcephalosporinsandmetronidazole,andgentamicincouldbeadded[16]. In our study Antibiotics has not been associated directly with mortality among forniers gangrenepatients.

VI. Conclusion

Forniersgangrenepatientsshouldgetaggressivetreatmentprotocol.Fournier'sgangrenecontinuestobeasever esurgicalemergency,withahighmortality rate.Early diagnosisandaggressivesurgicalandantibiotic therapy are necessary for adequate management. Risk factors and comorbid conditions has to be takencaresimultaneously.

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