ABSTRACT
Peutz-Jeghers syndrome (PJS) is an autosomal-dominant inherited syndrome characterized by hamartomatous polyps and pigmented macules of mucous membranes and skin. The polyps occur most commonly in the gastrointestinal tract but extra-intestinal polyps may occur rarely. Possible sites include the respiratory tract, urogenital tract and gallbladder. Herein we report this case of ours in a 64 year old female who presented with pain abdomen and radiological investigation revealed a polyp of the gall bladder. Further histopathological examination confirmed this rare diagnosis of Peutz-Jeghers polyp of the gallbladder.

Key Words: Cholecystitis, Gallbladder, Hamartomatous Polyps, Peutz-Jeghers Syndrome and Solitary

INTRODUCTION
Peutz-Jeghers syndrome (PJS) is an inherited cancer syndrome with autosomal dominant trait, characterized by mucocutaneous melanin pigmentation and hamartomatous intestinal polyposis. Peutz (1921) described 7 cases of multiple intestinal polyps associated with melanin spots on the lips, buccal mucosa and digits. Jeghers et al., (1949) described 10 further cases exhibiting the typical features and noted the familial incidence. Foster & Foster (1980) described the first case of gall bladder polyposis in a patient with PJS. Gallbladder polyps are well-known abnormalities in the general population. Gallbladder polyps may be grossly divided into 2 groups as tumorous and nontumorous polyps. The nontumorous group consists of inflammatory and cholesterol polyps, whereas tumorous polyps are adenomas, adenomyomas, and early gallbladder carcinomas (Sun et al., 2004). We report a case of solitary peutzjeghers polyp of gall bladder in a patient with no other clinical manifestations of Peutz-Jeghers syndrome like mucocutaneous melanin pigmentation and intestinal polyps.

CASE REPORT
Clinical History
A 64yr old female came to the surgical OPD with the chief complaint of pain right upper abdomen since 2 months with unremarkable medical and family history. On examination, there was mild tenderness in the right upper quadrant. Peripheral blood smear revealed Normocytic Normochromic blood picture with mild thrombocytopenia. Liver Function tests showed total Bilirubin – 1.8mg/dl (Normal range 0.1-1.0mg/dl), Direct Bilirubin –0.9mg/dl (Normal range 0.1-0.4mg/dl), SGPT – 95IU/L(Normal range 6-40IU/L), SGOT – 155IU/L(5-40IU/L),ALP – 1019IU/L(Normal range30-120IU/L).Computed Tomography of abdomen and Magnetic Resonance Imaging revealed single Polypoidal growth with a pedicle measuring 2.5cms in the gall bladder (Fig. 1&2). The patient underwent radical cholecystectomy (Fig. 3).

Gross Features
We received cut opened gall bladder along with adherent liver tissue measuring 9x5cm. Wall thickened with 0.8cms thickness. Polyp sent separately in bits all together measuring 2.5cc. Cut section grey white to grey brown and 3 lymph nodes.

Figure 1: CT scans of abdomen showing heterogenous density in the gall bladder
Microscopic features
Multiple Sections studied from the polypoidal mass showed mucosa thrown in branching villous architecture with arborisation, vascular cores and smooth muscle bundles splaying into the villous structure. Glands were
lined by single layer of columnar epithelium with basally placed nuclei and focal stratification. Few of the glands showed mild dysplastic changes. Focal areas show invasion of such glands into the muscular layer (Fig. 4, 5, 6 & 7).

Figure 6 & 7: Hematoxylin & Eosin, 40x High power view showing smooth muscle and hyperplastic glandular epithelium

Sections taken from the rest of the gallbladder revealed polypoidal hyperplasia of the mucosa with adenomatoid proliferation of the glands and features of chronic nonspecific cholecystitis. Sections from liver bed showed central venous congestion changes and inflammatory aggregates around portal triads. Sections from the Lund’s lymph node showed reactive hyperplasia. A final diagnosis of solitary Peutz - Jeghers polyp of the gall bladder was offered.

DISCUSSION
Peutz-Jeghers syndrome (PJS) is an autosomal-dominantly inherited syndrome characterized by hamartomatous polyps in the gastrointestinal tract, pigmented macules of mucous membranes and skin, and a predisposition to gastrointestinal and other tumours. There is no sex predilection. The usual age of presentation is in the second to third decade of life. As the incidence is rare, well documented data on the incidence is not available. The small bowel is the most common affected site followed by colon, stomach, duodenum, and appendix. Microscopically, the hamartomatous polyps are characterized by an arborizing pattern of smooth muscle which is derived from the muscularis mucosae and surrounds lobules of hyperplastic glandular epithelium, typical of the involved segment of the gastrointestinal tract. The most common germline mutation is in the STK11 tumor suppressor gene on chromosome 19p13.3. Due to the variable and incomplete penetrance of the inherited allele, PJS patients show significant phenotypic variability (Hamilton & Aaltonen, 2000). Extra intestinal polyps may occur rarely and the possible sites include the respiratory tract, urogenital tract, and gallbladder as in the current discussion. A case of hamartomatous polyp of gall bladder with an associated choledochal cyst in a 16 year old patient without PJS was also reported Devrim et al., (2010). In a study of 72 patients with PJS, only 3 were found to have gall bladder polyps. Hamartomatous polyps of the gallbladder are extremely rare abnormalities and were first reported in 1998 in a 2-year 6 month-old boy with no known history of PJS at the report of the case (Vogel et al., 2000 and Guzmán et al., 1998). Routine oral cholecystography in patients with known PJS may show further cases of gall bladder polyposis. The occurrence of biliary colic in a patient with PJS should suggest the presence of gall bladder polyps probably associated with calculi. Carcinoma of the small bowel, the main site of polyposis, is rare and malignant change occurs more commonly in the colon, stomach or duodenum (Dozois et al., 1969). While intussusception has been a major source of mortality in PJS kindreds surgery constitutes an effective treatment. Thus, prognosis of the affected individuals is mainly related to the risk of malignancy in PJS. Due to the rarity of the syndrome, there is little information on prognosis, but one report suggests that PJS-associated cancers are particularly aggressive (Spigelman et al., 1989).

In the present case, the patient had no other clinical manifestations of PJS. A small bowel follow – through was also negative for polyps. Patients with only one PJP may have a cumulative lifetime risk of cancer similar to those with the syndrome (Burkart et al., 2007), warranting similar follow up. Since about 30-40% of the patients do not have the STK11 gene mutation, the available genetic tests cannot be used to rule out the syndrome.

CONCLUSION
Herein we report this very rare case of solitary Peutz-Jeghers polyp in gall bladder without syndromic manifestations. Hence it is justified to say that the patient underwent radical cholecystectomy, as the risk of
malignancy of PJ polyps exists. The patient should be educated on the potential risk of malignancy in the intestinal and extraintestinal and thus instructed on the need for cancer surveillance. Follow up of patient is absolutely necessary. In our case the follow up is being done.

REFERENCES


