Appendics.1 age wise distribution of 315 testicular pathology

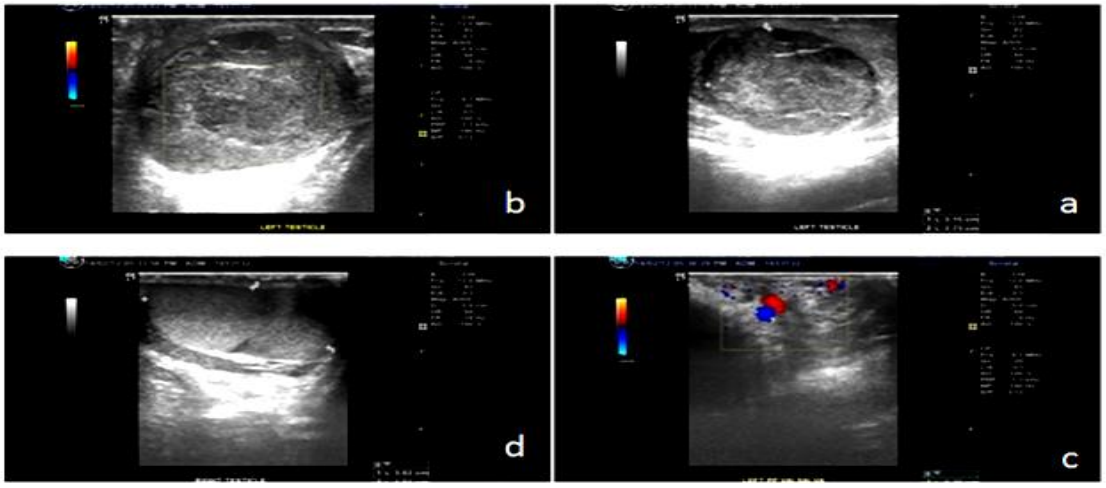
Pathology	Number	Mean age	
Abscess	6	64 years	
Encysted hydrocele	11	11 years	
Epididymal masses	88	41.8 years	
Epididymitis	12	27.25 years	
Epididymoochitis	14	46.1 years	
Hematoma	15	38.1 years	
Inguinal hernia	14	28 years	
Microlithiasis	12	40.4 years	
Orchitis.	4	34.75 years	
Seminoma	23	32 years	
Non seminoma	7	32.9 years	
Lymphoma	5	52.6 years	
Simple cyst	18	38.5 years	
Spermatocele	17	44.8 years	
Torsion.	12	20.41 years	
Tubular ectasia	9	48 years	
Tunica albugenia cyst	5	34.6 years	
Undescended testis	32	13.4 years	
Varicocele	11	36 years	
Total			
Average	11094÷315 =35.2		
Renage		From neonatal to 90 years old	

Appendics.2 markers information for malignancy

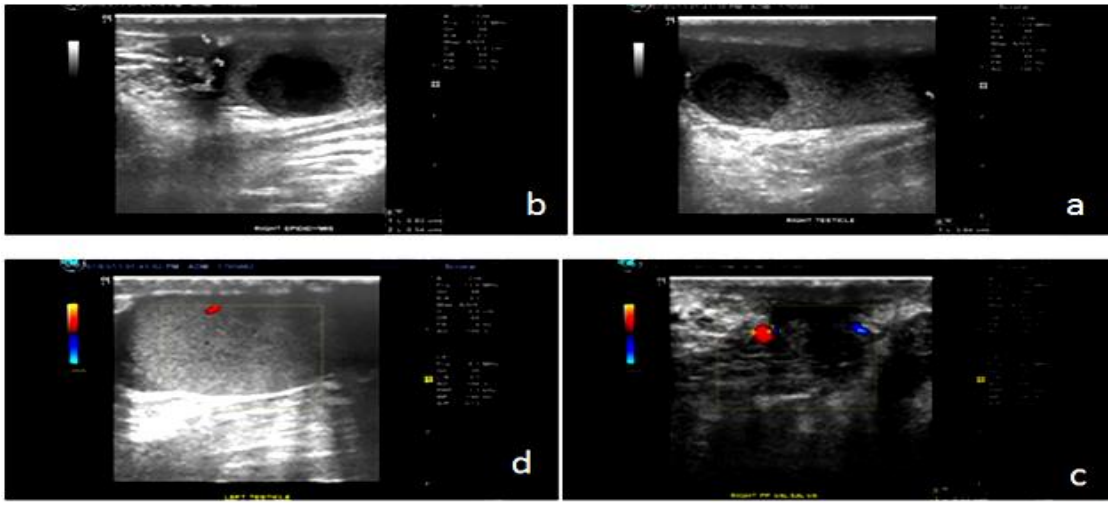
Type of malignancy	Age	HCG	AFP levels	LDH levels
Seminoma	23	5800	24.80	1.56
	24	28800	30.1	2.34
	39	1700	22.90	2.13
	24	4000	8.90	1.99
	34	6000	12.4	2.70
	24	3008	12.44	1.34
	37	2070	1.7	2.17
	38	1901	22.12	2
	38	1500	11.5	1.59
	33	2000	1.34	1.3 X N
	25	4.47	1.6	3
	42	2.22	5.9	1.8
	38	1.74	1.8	1.90
	39	1850	56.8	2.8
	38	3.1	1.7	1.7
	28	2.90	3.76	1.58
	30	1.81	1.2	2.11
	24	1.7	1.3	1.88
	50	1	1.55	1.4 X N
	39	4.89	2.99	1.1 X N
	29	1.95	1.1	1.2 X N
	43	3.76	101.77	1.3 X N
	22	.88	89.12	1.51 X N
Embryonal cell carcinoma	89	1.33	213.5	2.16
	32	3.21	2000	1.6 X N
	10	53007	10240.9	1.11 X N
yolk sac tumour	1	4.66	1050.54	1.77
	5	3.6	149.4	1.2 X N
Teratomas	31	1.51	10020	2.6
	39	2.37	1030	1.4 X N
Lymphoma	30	2345	10055.8	2.55 X N
	29	4.11	10100	1.33 X N
	26	5	1220.9	1.41 X N
	90	3.66	567.2	2.4 X N
	61	51804	14.7	11.2

Lactic dehydrogenase

Appendics.3 ultrasonic images

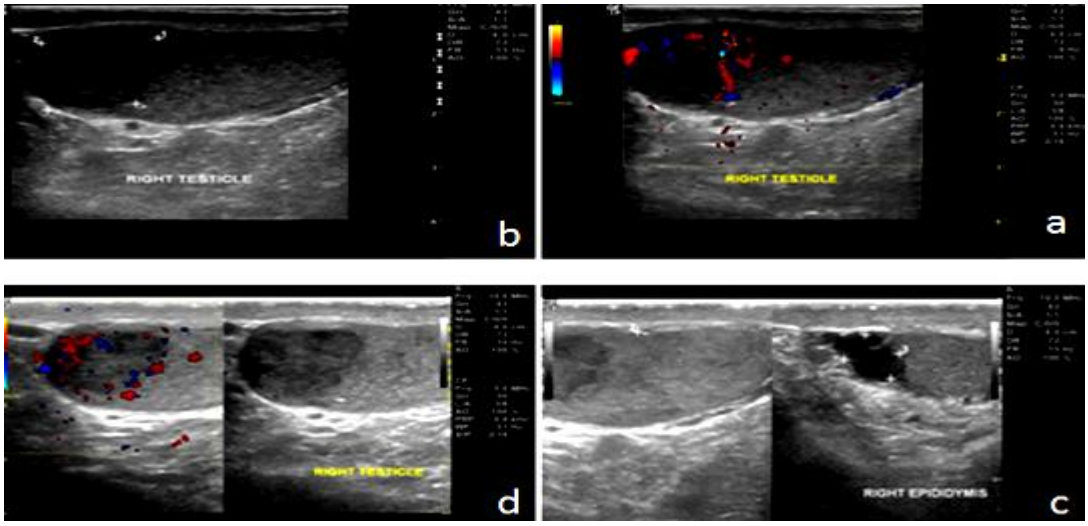


Images (1) shows testicular image of 31 years patient. There is well defined hypoechoic mass lesion occupying most of the left testicle with evidence of calcified foci and cystic component measuring about 3.15 x 2.73 cm. Bilateral mild hydrocele is noted. This mostly is representing small left sided varicocele. Impression: Evidence of well-defined heterogeneous mainly hypoechoic mass lesion occupying most of the left testicle with evidence of calcified foci and cystic component measuring about 3.15 x 3.73 cm which mostly representing left testicular tumor seminoma . Please for clinical correlation and further evaluation (FNA). Small size left-sided varicocele is seen. Please for clinical correlation.

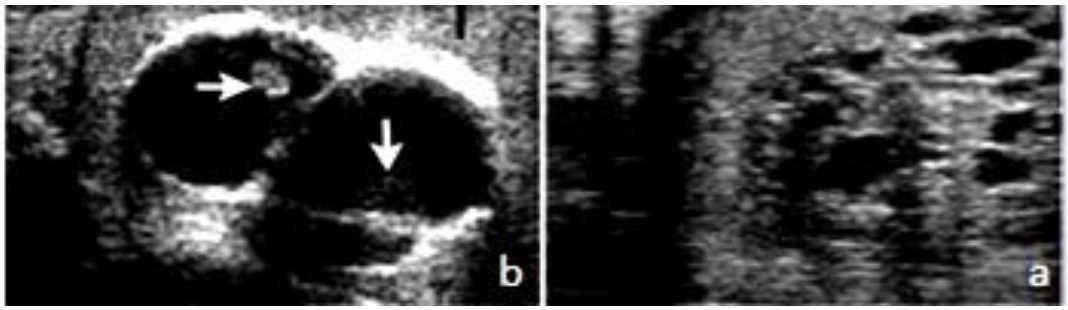


Images (2) shows testicular image of 39 years patient. There is a well-defined hypoechoic mass lesion seen within the right testicle measuring about 1.5 x 1 cm with no evidence of increase vascularity in color Ultrasound which mostly presenting testicular tumor. Right testicle = 2.8 x 1.65 x 3.64 cm. Right epididymis = 0.82 x 0.54 cm. Left testicle = 3 x 2.44 x 3.7 cm. Left epididymis = 0.9 x 0.43 cm. No evidence of varicocele or hydrocele could be detected. Impression: There is a well-defined hypoechoic mass lesion seen within the right

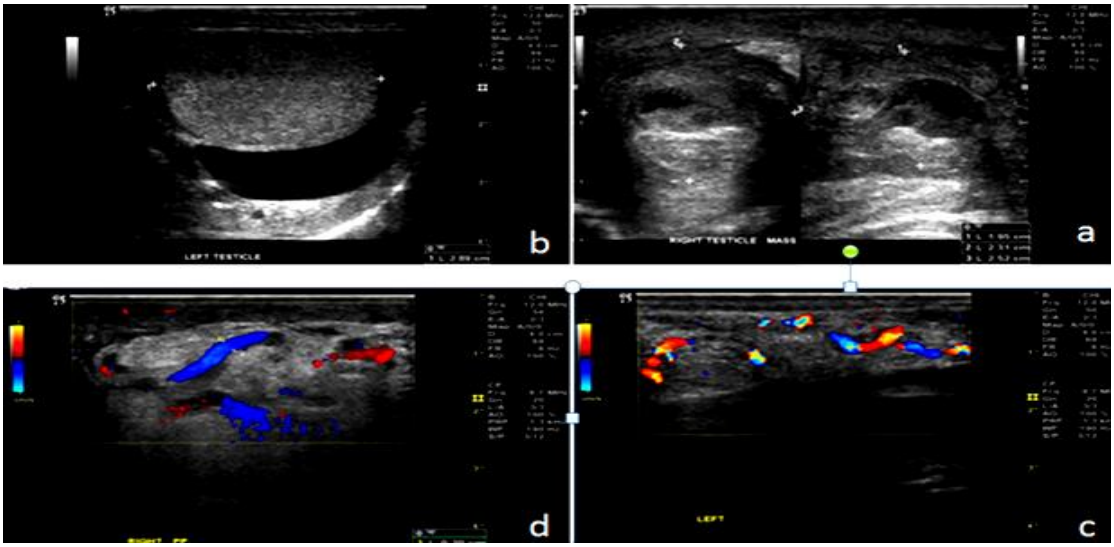
testicle measuring about 1.5 x 1 cm with no evidence of increase vascularity in color Ultrasound which mostly presenting testicular tumor. The differential diagnosis would include germ cell tumor mostly seminoma but other possibility cannot be excluded. Further evaluation is advised.



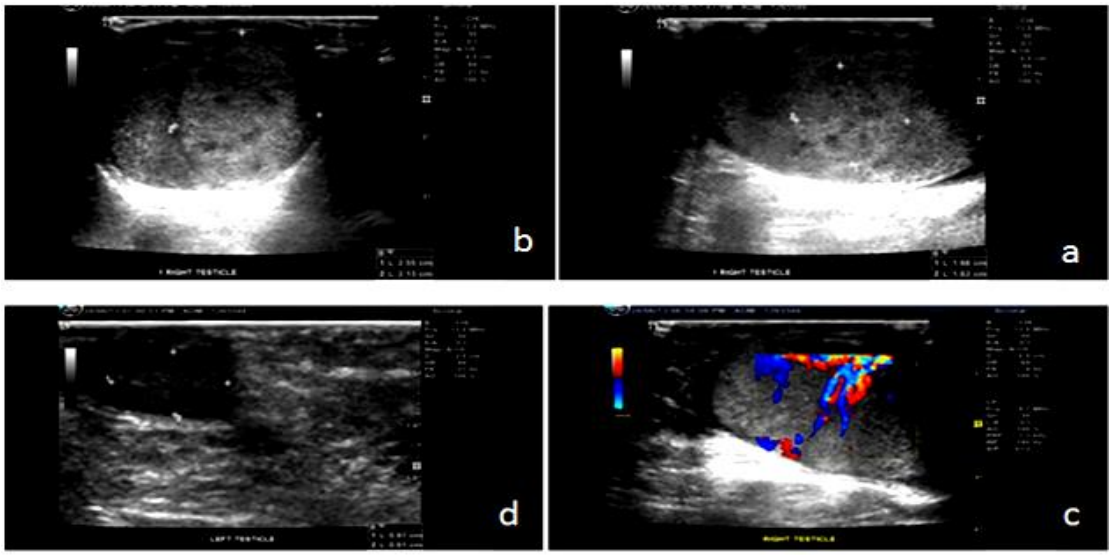
Images (3) U/S patient age 38 - shows relatively well defined heterogeneous hypoechoic mass lesion measuring about 1.8 x 1.5 cm noted at the upper pole of the right testicle with evidence of significant vascular enhancement of color Doppler Ultrasound raising the possibility of testicular tumor ?. As well as there is a cystic component at the area of the epididymis measuring about 0.7 x 0.8 cm. The left testicle appears normal in size, shape and having homogeneous hyperechoic echopattern with no definite focal lesion. The left testicle measure 3.7 x 2.2 x 2.3 cm. The left epididymis is measuring about 0.9 x 1 cm with evidence of small cyst measuring about 0.2 x 0.2 cm. Impression: Relatively well defined hetrogenous hypoechoic mass lesion seen at the right upper pole of the right testicle with evidence of vascular enhancement raising the possibility of r



Images (4) shows testicular image of 32 year old .hypoechoic multiple cystic areas are seen and also cystic mass with sepetation (solid nodule). Both epidedymis are of normal size and shape .No hydrocele or varicocele is seen. Conclusion: suspeseouns of germ cell tumor teratoma. right testicular tumor? Further evaluation is advised (biopsy).

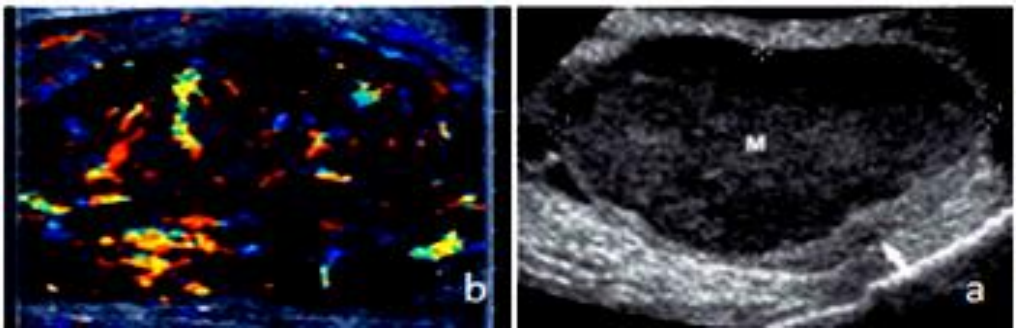


Images (5) U/S. patient age 89 years -shows Large ill-defined heterogeneous mass lesion seen in the right testicle containing necrotic area as well as a calcification measuring about 1.95 x 2.31 x 2.52 cm,which may represent secondary deposit from kidneys or prostate or bronchus. Also, close differential diagnosis is primary germ cell tumor (embryonal cell carcinoma) and lymphoma or leukemia cannot be excluded. Follow-up is advised. Left testes appear normal in size and echopattern. No focal lesions detected. Left testis = 2.11 x 3.96 x 2.89 cm. Left epididymis = 0.79 x 0.79 cm. Significant amount of left-sided hydrocele with internal echoes is noted. Impression: Large ill-defined heterogeneous lesion seen in the right testicle. Significant amount of left-sided hydrocele.

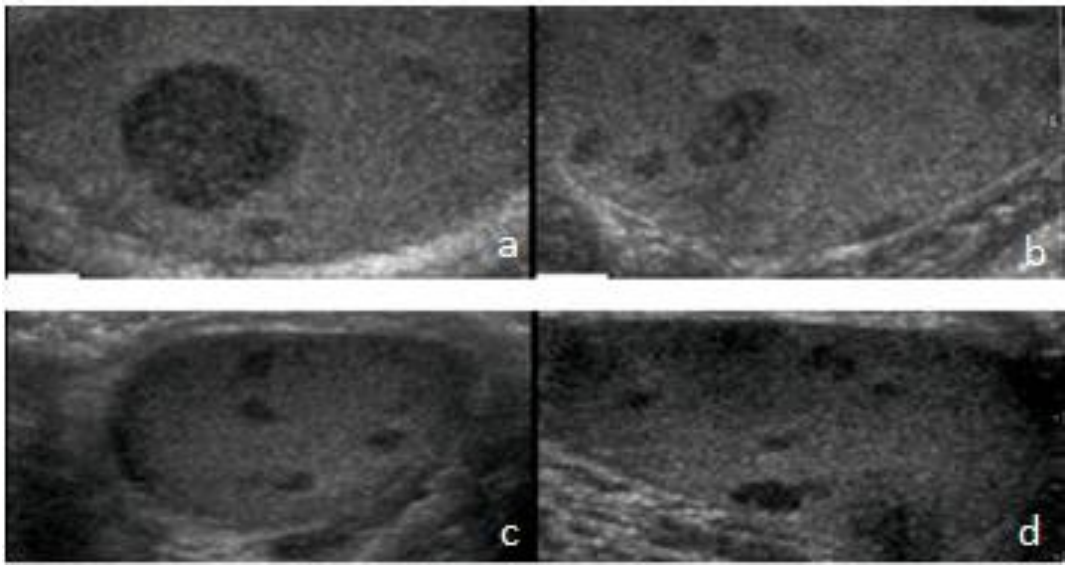


Images (6) shows testicular image of 1year patient. The right testes appear enlarged with isoechoic heterogeneous lesions involving most of the right testes measures about 4.0 x 2.5cm. There is vascularity noted inside the lesion. The right epididymis appears normal in configuration. The left testicle is small and appears undescending in the distal of inguinal canal measuring 0.9 cm x 0.6 cm. The vascularity is unremarkable. The left epididymis appear unremarkable.

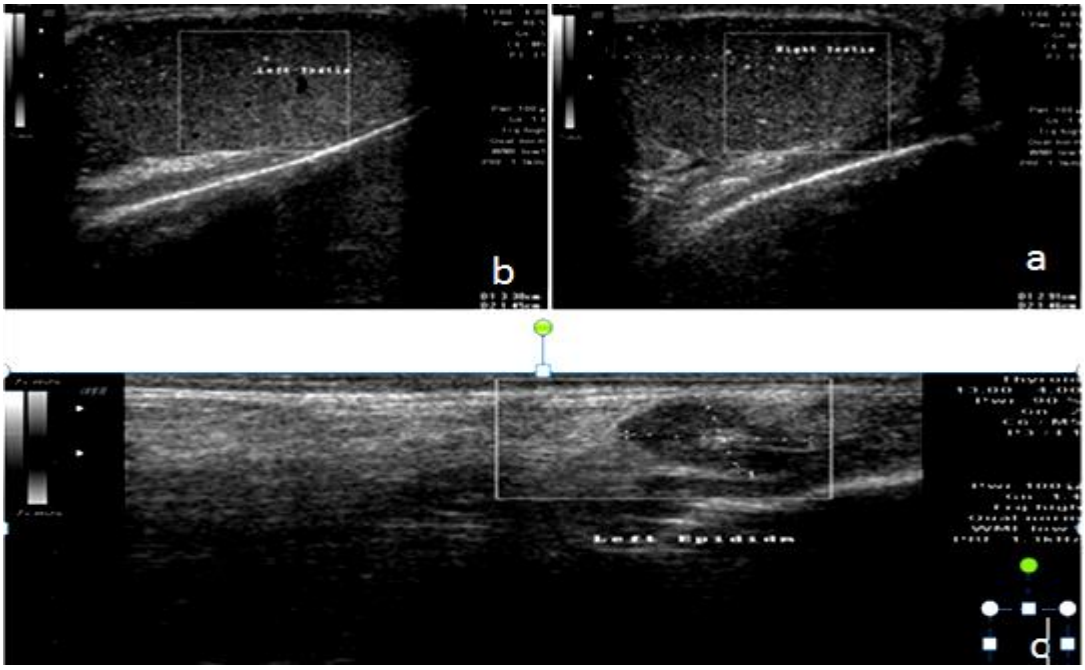
Conclusion: Above mention findings are suggestive of represent of malignant testicular mass like yalksca tumor, for laboratory investigation to assess alpha fetoprotein and surgical assessment.



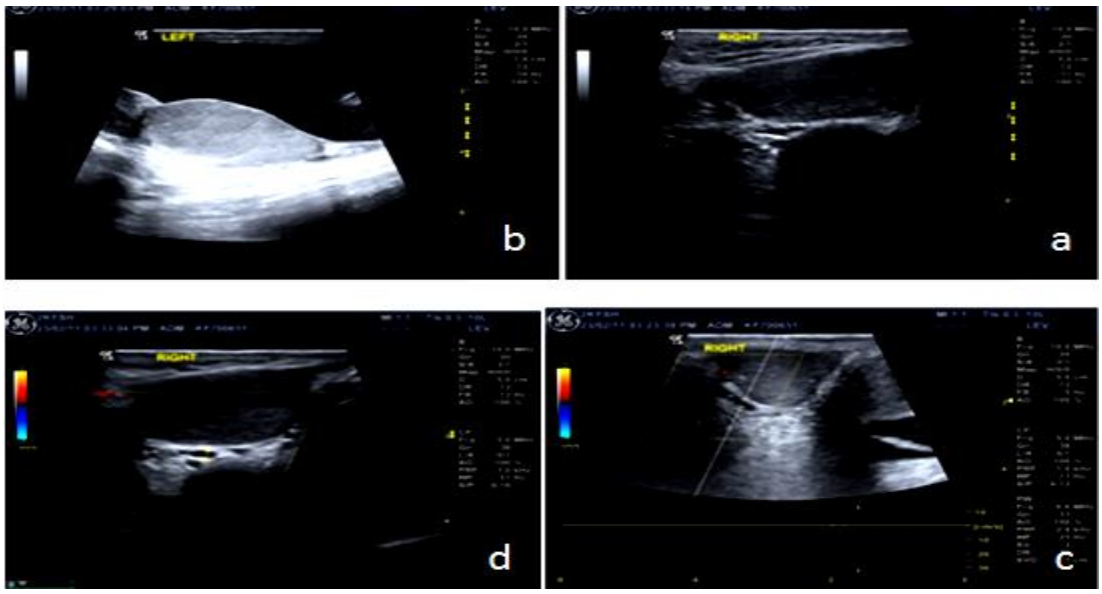
Images (7) shows testicular image of 54 years old .hypoechoic mass seen in both testes (Lobulated masses) .increase of blood flow in the tumor .conclusion most probably suggestive lymphoma?



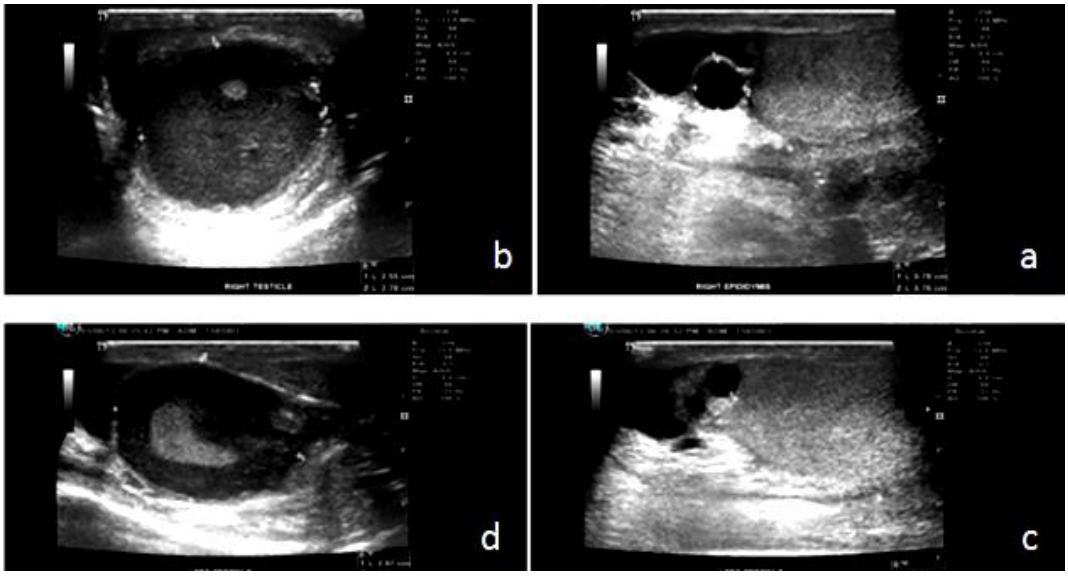
Images (8) shows testicular image of 60 years old. The largest lesion (palpable) measured 1 x 0.7cm. There was no associated increase in vascularity and both epididymis were normal in appearance. The findings were reported a consistent with lymphoma or less likely multifocal seminoma.



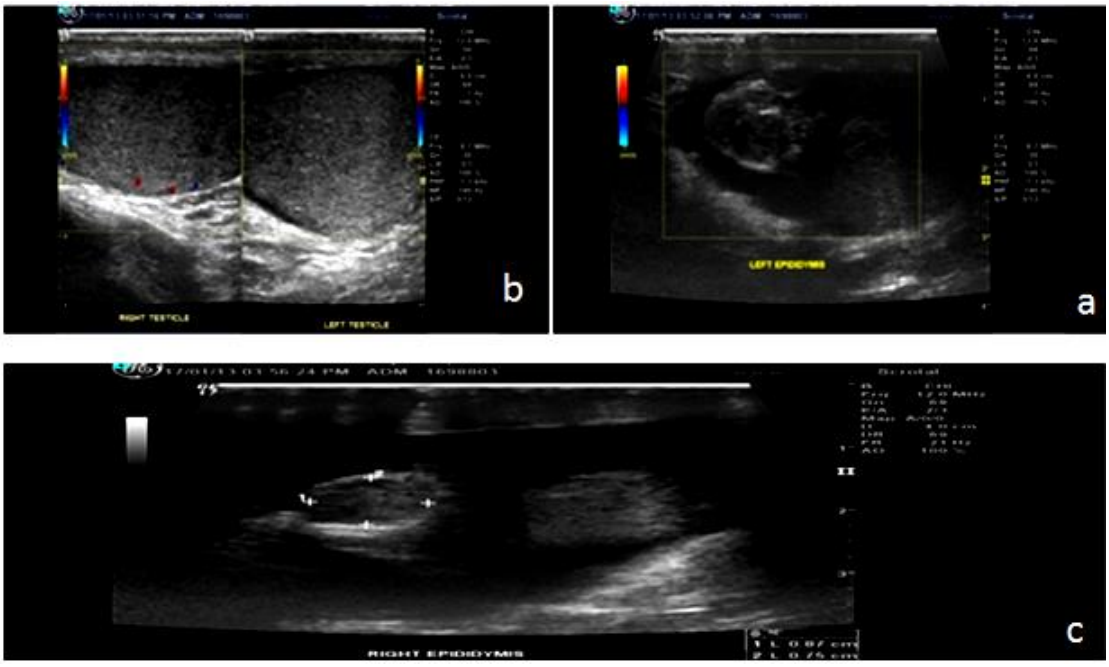
Images (9) shows testicular image of 62 years. Both testis show normal size, uniform echopattern with diffuse micro calcifications and intact capsules .Normal appearance of both epididymis. No evidence of vaginal hydrocele .No evidence of varicocele. Conclusion: Diffuse microcalcifications.



Images (10) shows testicular image of 74 years. Thickened skin noted. -Normal size (3.7x1.7 cm), texture & vascularity of the right testicle &epidydimis. -The left testis measures (4.5x1.7 cm) with microcalcific changes (microlithiasis), however, no definite focal lesion identified sonographically or area of increased vascularity. Moderate left hydrocele.-No varicocele seen. Conclusion: Considering the age, suspicious left testicular texture for further assessment & clinical correlation.

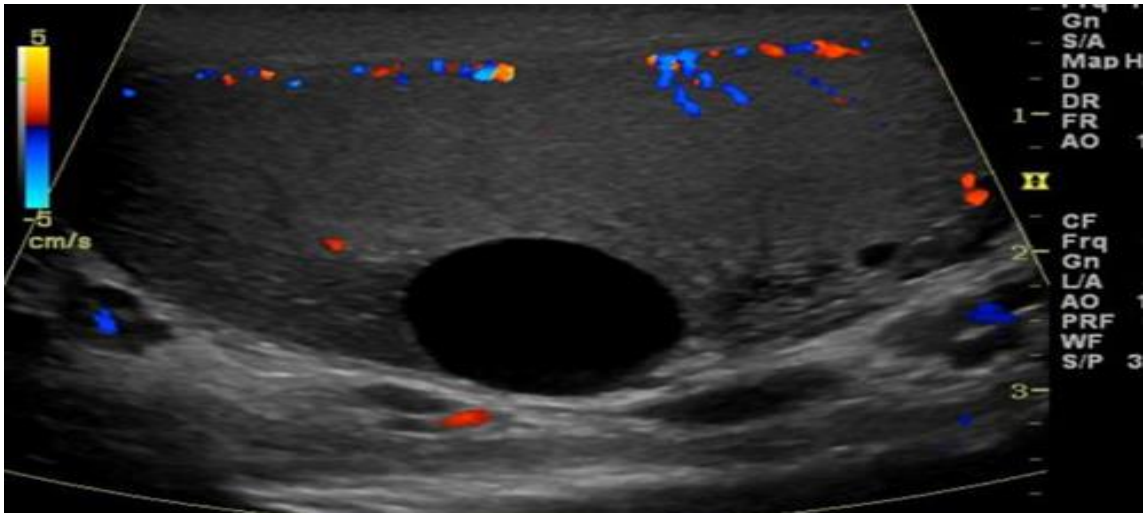


Images (11) shows testicular image of 90 years patient. History of left-sided orchiectomy before one year. Findings: Follow up study since 8 September 2013, shows no significant change regarding heterogeneous echogencity of the right testicle with no evidence of vascularity in color ultrasound suggestive of right testicular necrosis which may be due to previous orchitis. Mild thickened right epididymis is noted. Mild right-sided hydrocele is noted. Evidence of diffuse thickened wall, septated and lobulated collection seen in the left side with low level internal echoes and increased vascularity in the peripheral mostly representing pocket of collection. For clinical correlation.

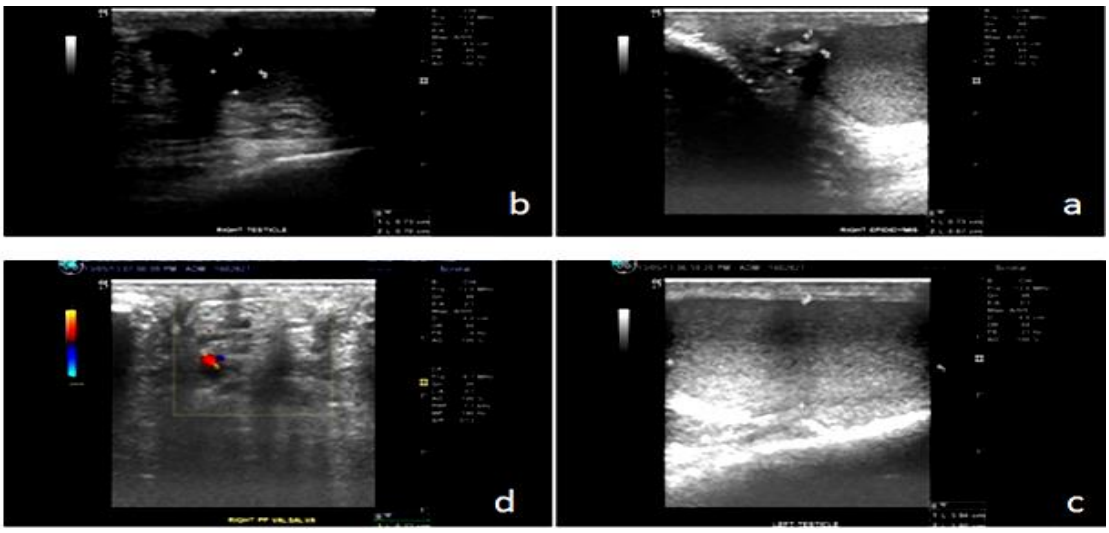


Images (12) shows testicular image of 39 years patient. History: Torsion testes and post-operative follow-up. Findings: The size of the left testis is becoming within normal limit, it is measuring about 3.3 x 1.6 cm with a good blood flow

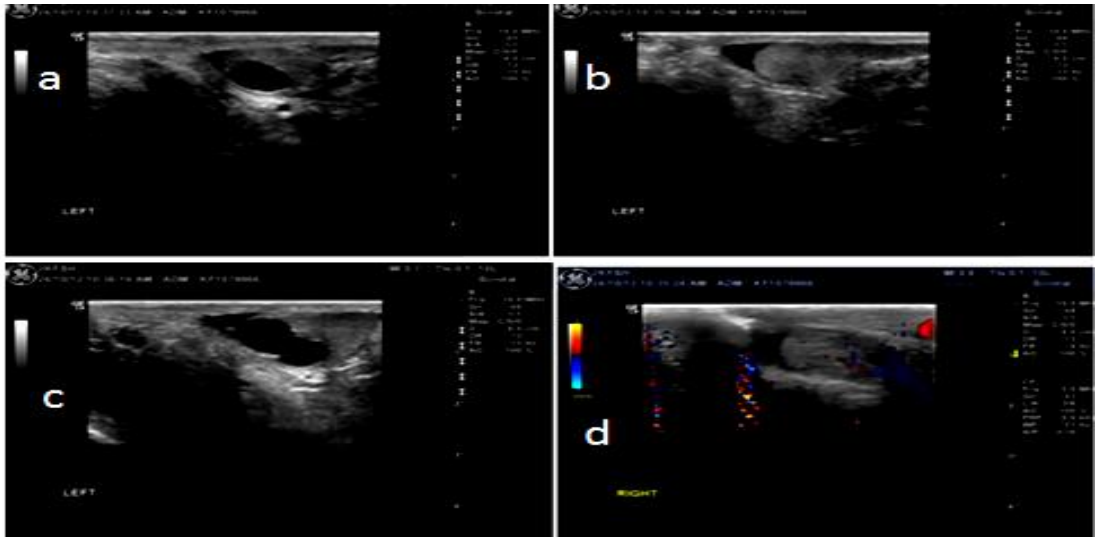
and the vascularity. Normal size, shape and echogenicity of the right testis with normal vascularity. There is a small hypodense area seen at the superior surface of the right testis measuring about 0.6 x 0.3 cm, it could be due to post fixation. Follow-up is recommended.



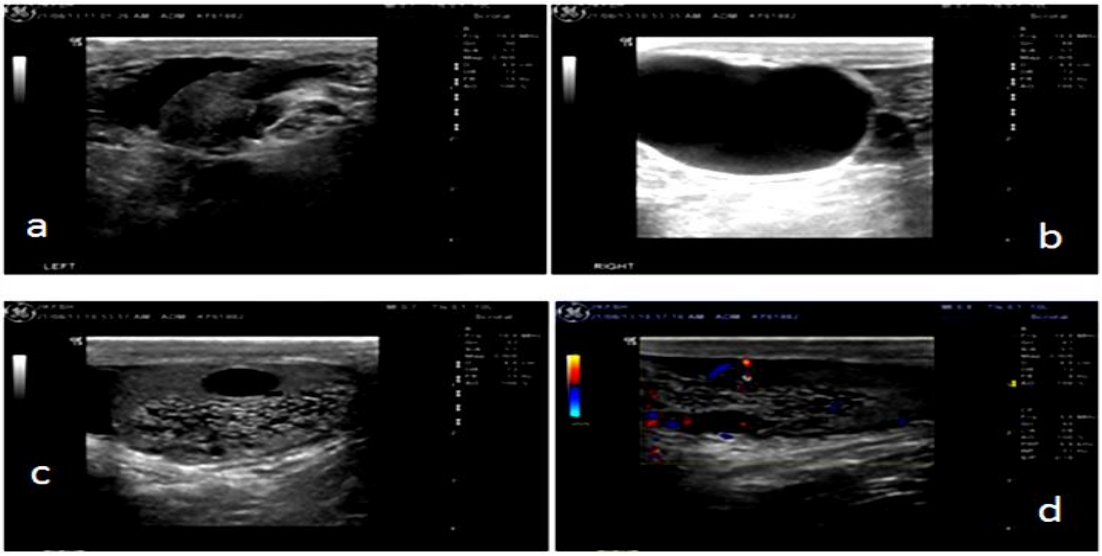
Images (13) shows right testicular cysts are age 13 year usually well-defined and anechoic with enhanced through transmission and an imperceptible wall size 1.5X2cm. no associated increase in vascularity and both epididymides were normal in appearance.



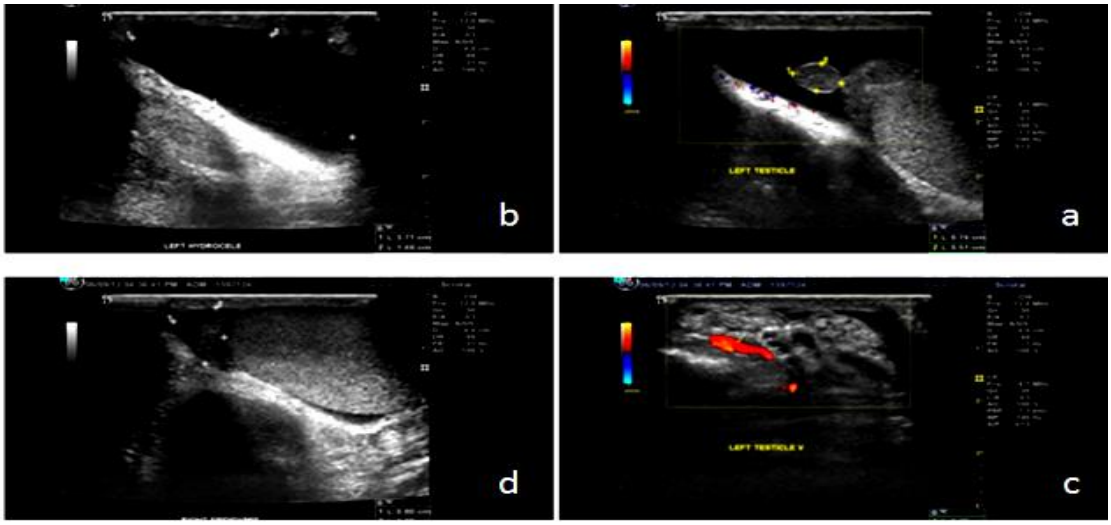
Images (14) shows testicular image of 33 years. Both testes appear normal in size and echopattern. Right testis = 4.14 x 2.09 x 2.65 cm. Right epididymis = 1.15 x 0.52 cm. Left testis = 4 x 2.19 x 2.54 cm. Left epididymis = 0.66 x 0.68 cm. There is a well-defined cystic lesion seen in the superiolateral part of the right testicle with thick septum and calcified wall which measuring about 0.6 x 0.55 cm. which could be represent a complicated testicular cyst. No evidence of hydrocele or varicocele.Impression: Well-define complicated cystic lesion seen in the right testicle. Please correlate clinically.



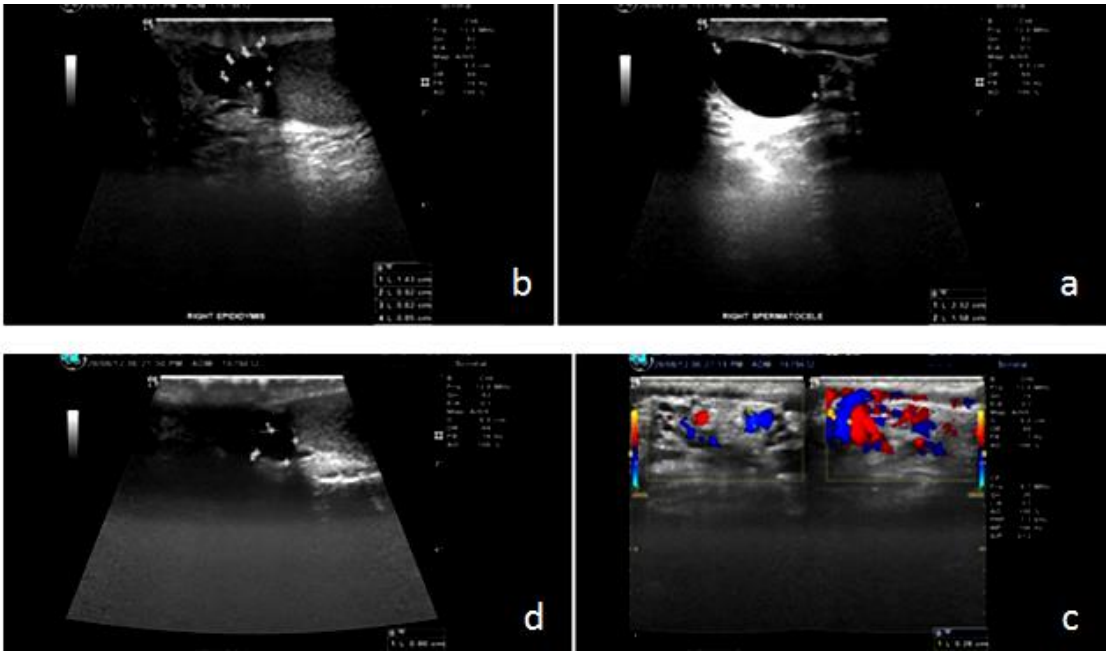
Images (15) shows testicular image of 16 years patient. No evidence of testicular infraction, Doppler shows bilateral symmetrical color flow. No evidence suggesting orchitis or epididymitis. No testicular focal lesions or calcification. Noted left epididymal head two cyst (7.5 * 6 mm and 6*6 mm).No pyoceles .No significant hydroceles. Normal scrotal wall thickness. No paratesticlar masses.



Images (16) shows testicular image of 77 years patient. Bothe testes are normal in size, shape and out line with normal echotexture Right rete testis is noted (normal variant).Right intratesticular two small simple cysts are seen (9, 6 *6.7mm and 6.2*3.3mm). Right epididymal head cyst measured 22*16 mm with no internal suspicious finding. Bilateral small free hydrocele is noted .no testicular solid lesion is seen. Left epiddidymal head two small cystic lesions are seen between head and body. Doppler shows normal testicular blood flow.

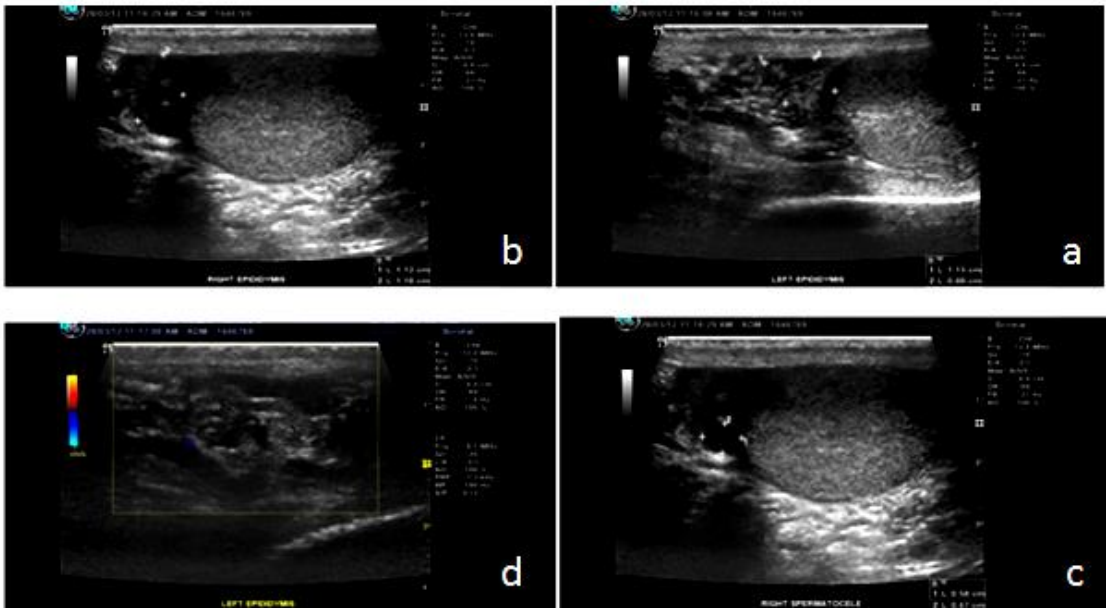


Images (17) shows testicular image of 32 years patient. Both testes are within normal size, shape and density with no focal lesion is seen. Left testis = 4.3 x 2.4 cm. Left epididymis = 0.85 x 0.76 cm. Right testis = 4 x 1.8 cm. Right epididymis = 0.8 x 1.0 cm. There is a small well defined rounded soft tissue projecting from the left epididymis with the same echogenecity measuring about 0.7 x 0.5 cm. There is a small left hydrocele measuring about 3.7 x 1.5 cm. Impression: Comparing to previous study dated on 14 August 2012, no significant changes regarding the size of the soft tissue projecting from the epididymis. The left sided hydrocele is slightly increased in size in comparing with the previous one. It is measuring about 3.7 x 1.5 cm

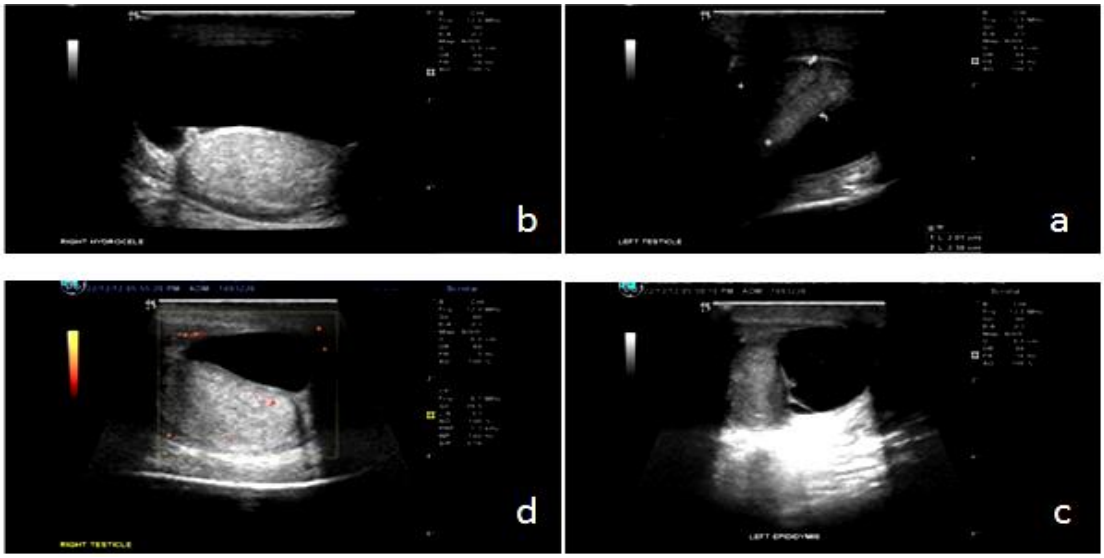


Images (18) shows testicular image of 54 years patient.Sonographic Findings: Right testis measured 4.51 x 1.94 cm. Focal dilatation of the vein noted within the right testicle. No other focal lesion seen. Otherwise, the test is showed normal echogenicity. Left testicle measured 4.61 x 2.27 cm with normal echogenicity with

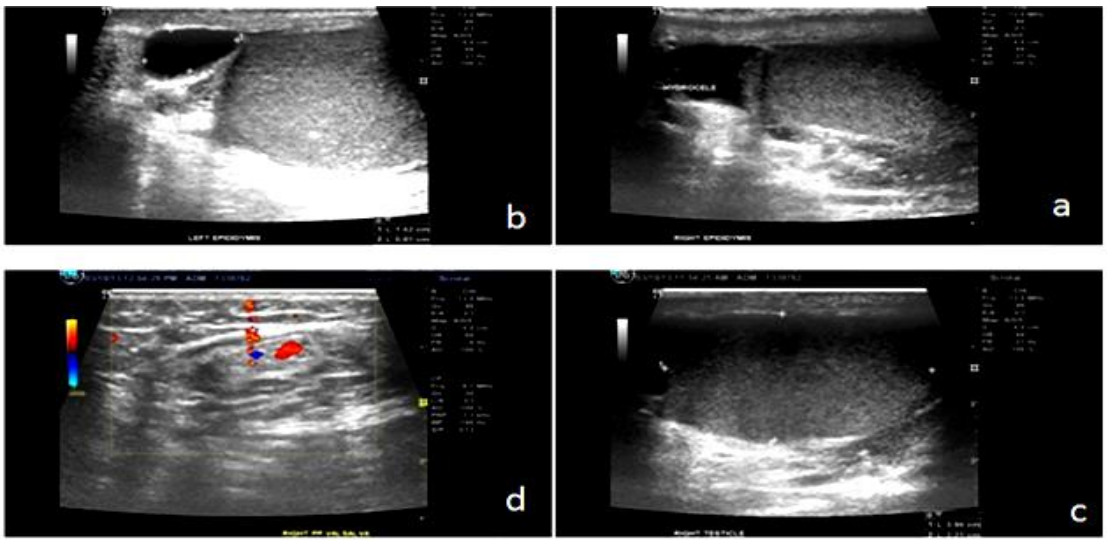
slight focal dilatation of the vein. Evidence of bilateral epididymal cysts and spermatoceles. The largest spermatocele is noted right side, measuring about 2.32 x 1.58 cm. The right epididymal cyst measured 0.62 x 0.85 cm. The large epididymal cyst left side measured 1.13 x 0.84 cm. The right pampiniform plexus measured 0.19 cm at resting state without increase in diameter at Valsalva, however, the left pampiniform plexus measured 0.28 cm at rest with increase in diameter up to 0.38 cm after Valsalva suggesting mild varicocele in the left side. No hydronephrosis seen. Impression: Mild varicocele, left. Bilateral epididymal cysts. A large spermatocele, right. Focal dilatation of the vein within the right testicle, otherwise, both testicles appear unremarkable.



Images (19) shows testicular image of 66 years patient. Both testes are within normal size, shape and echogenicity with no focal lesion is seen or focal area of increase vascularity. Left testis: 4.5 x 2.4 x 1.9 cm. Left epididymis: 1.13 x 0.9 cm. Right testis: 4.6 x 2.4 x 2.6 cm. Right epididymis: 1.12 x 1.2 cm. There is a small cyst seen in the right epididymis measuring about 0.6 x 0.5 cm representing as spermatocele. Small right-sided hydrocele measuring about 3.4 x 1.4 cm. Impression: Small right-sided spermatocele as mentioned above. Small right-sided hydrocele measuring about 3.4 x 1.4 cm

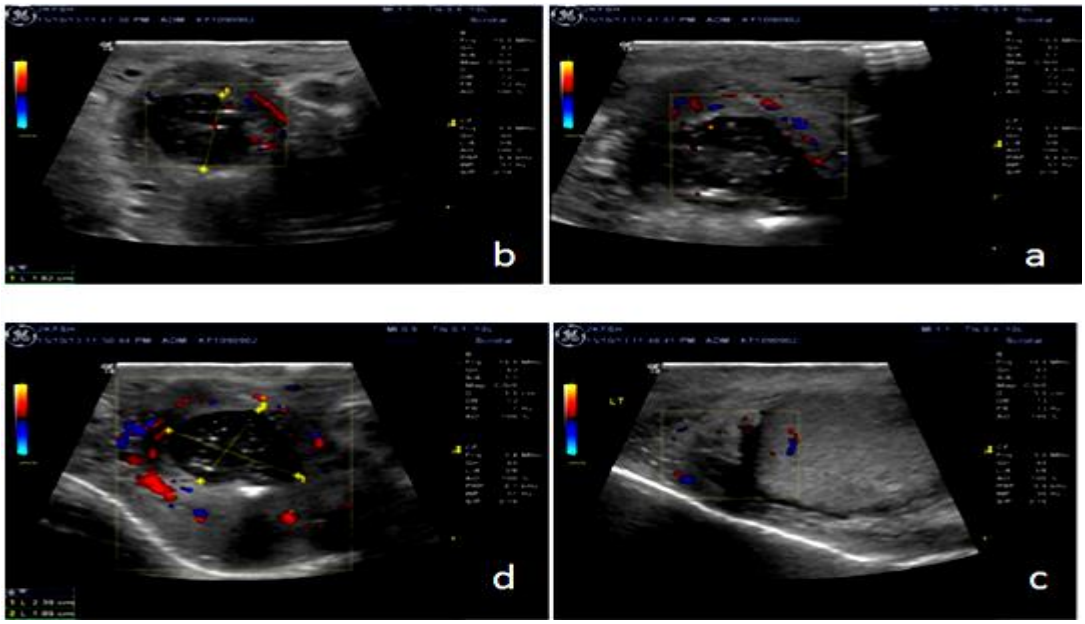


Images (20) shows testicular image of 17 years. Both testes appear normal in size and echopattern. No focal lesions detected. Right testis = 3 x 3.9 x 3.2 cm. Right epididymis = 1.1 x 0.73 cm. Left testis = 3.7 x 1.9 x 2.9 cm. Left epididymis = 0.95 x 0.7 cm. Bilateral dilated and tortuous pampiniform plexus seen along the spermatic cord and surrounding both testicles. After Valsalva maneuver there is evidence of reflux in both sides and the largest diameter in the right side is measuring about 0.49 cm and in the left side measuring about 1.83 cm. Evidence of well-defined small cyst seen in the superior portion of the right testicle peripherally measuring about 0.54 x 0.2 cm mostly presenting small tunica albugenia cyst. Impression: Bilateral varicocele. Medium size in the right and large size in the left side. Evidence of well-defined small cyst seen in the superior portion of the right testicle peripherally measuring about 0.54 x 0.2 cm mostly representing small tunica albugenia cyst , follow up is advised.

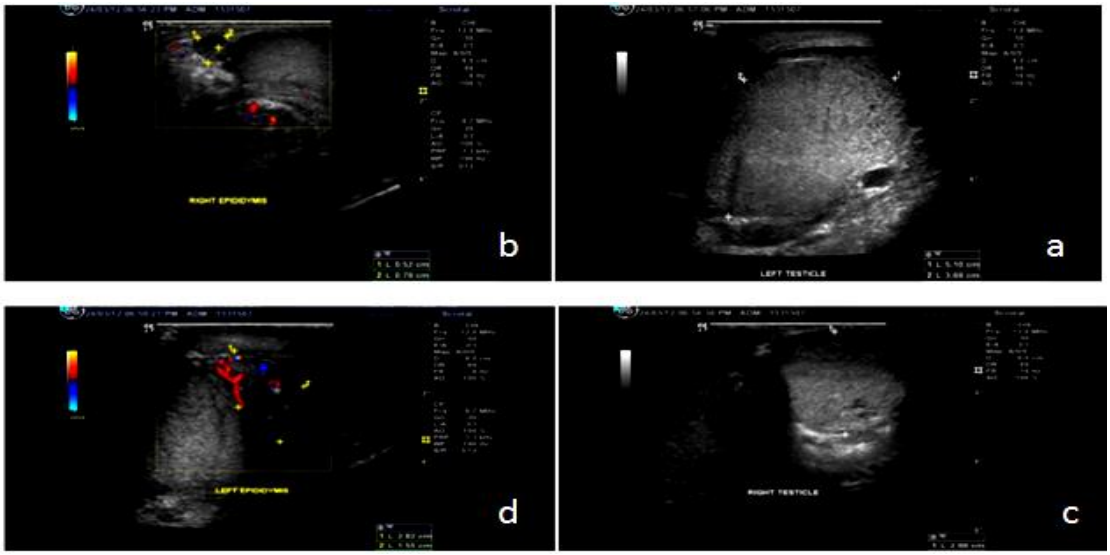


Images (21) shows testicular image of 57 years. Focal calcification is noted in the left testicle measuring about 1 x 1.7 cm. Right testis = 3.9 x 2.2 x 3.6 cm. Right epididymis = 0.64 x 0.7 cm. Left testis = 3.14 x 3 x 3.7 cm. Left epididymis = 0.96

x 0.56 cm. Evidence of bilateral epididymal head cyst. In the right side is measuring about 0.93 x 0.46 cm and in the left side measuring 1.4 x 0.8 cm. Bilateral mild hydronephrosis is noted with low level internal echoes seen mainly in the left side with evidence of tunica vaginalis cyst with long pedicle noted in the left side measuring about 0.75 x 0.68 cm. Impression: Bilateral mild hydrocele is noted, complicated in the left side with evidence of tunica vaginalis cyst with long pedicle. Follow up is advised.

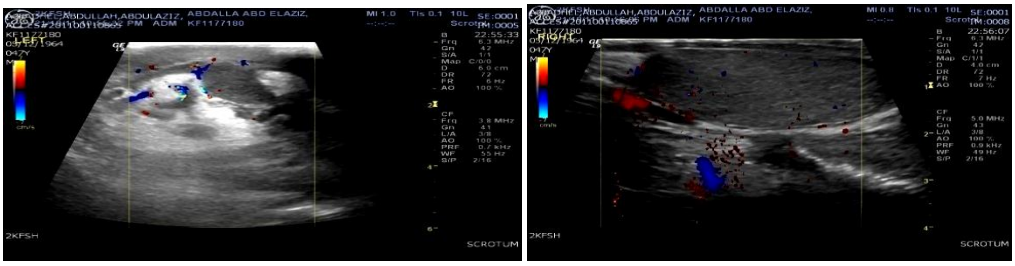


Images (22) shows testicular image of 70 years patient. Markedly thickened (2.3 cm) hyper vascular scrotal wall, more on the right side. localized hypoechoic collection is seen at the inter testicular region showing echogenic debris within, measuring about 2.1 cm *1.9 cm. Finding is impressive of diffuse scrotal wall inflammatory process with midline encysted collection (abscess)

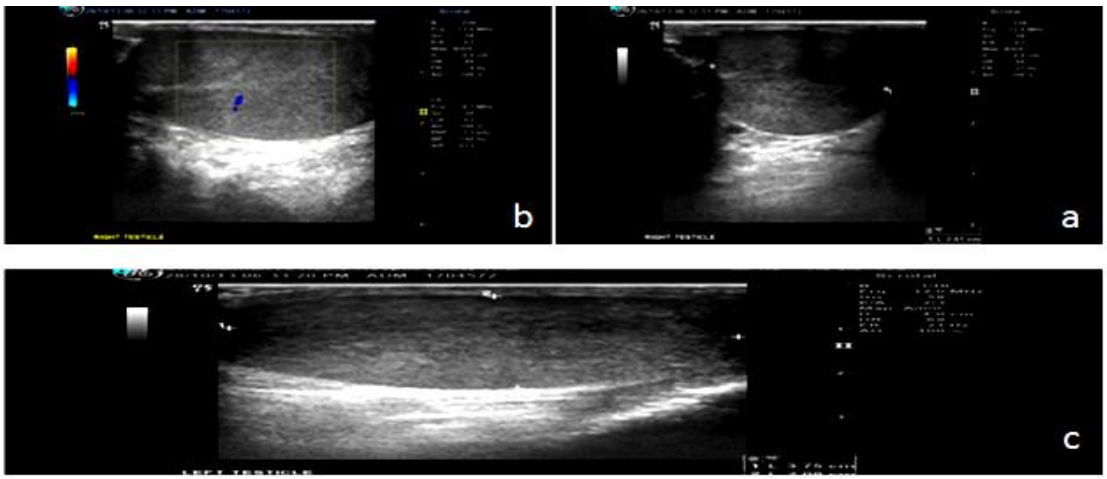


Images (23) shows testicular image of 72 years. Right testis, normal size, shape and echogenicity of the right testis. No focal lesion or focal area of increase

vascularity could be detected. Normal epididymis. It is measuring about 4.22 x 2.32 x 2.26 cm. Right epididymis is measuring about 0.98 x 0.65 cm. Left testis: The left testis is slightly large in size with some heterogeneous in echotexture as well as the epididymis with some exaggerated vasculature on Doppler. These findings are highly suggestive of epididymoorchitis. Left testis is measuring about 4.5 x 3.27 x 3 cm. Left epididymis is measuring about 4.5 x 3.25 cm. There is septated hypoechoic lesion mostly representing as left hydrocele. Impression: Large heterogeneous echotexture of the left epididymis as well as left testis with increase vasculature which most probably due to epididymoorchitis. There is left-sided hydrocele as mentioned above; it could be as reactionary one. Left spermatocele as mentioned above.

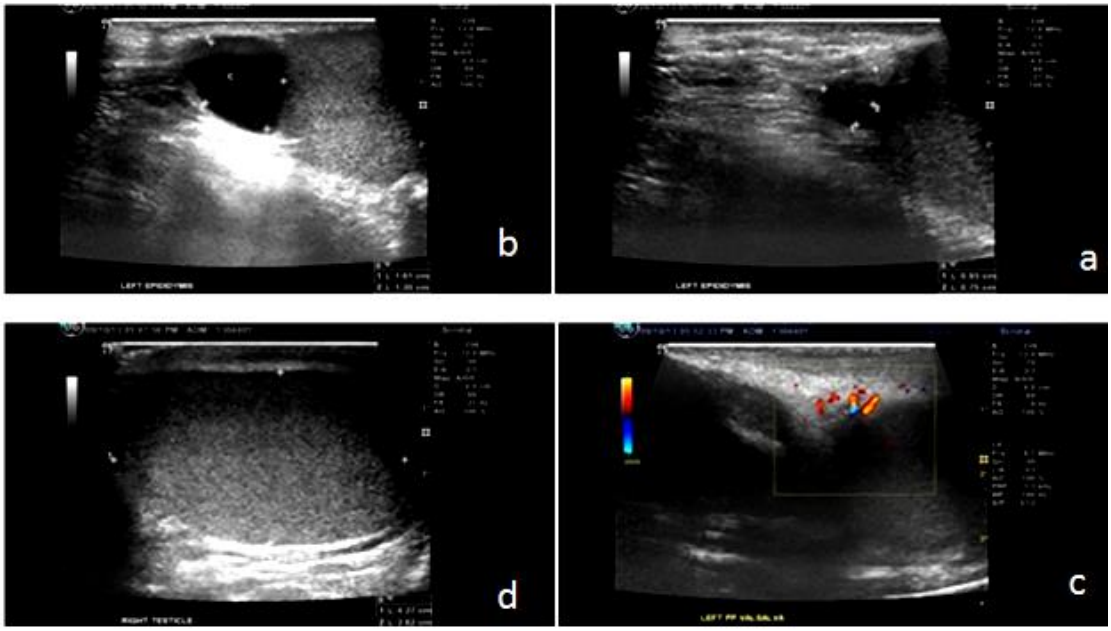


Images (24) shows testicular image of 48 years. The right testicle shows normal size, shape &echotexture with no evidences of hypo, or hyper echoic lesions. The left testicle & left epididymis is enlarged showing heterogenous echo pattern & increased vascularity on colour Doppler examination showing tenderness during examination. Likely inflammatory process. For clinical correlation. The right epidydimis show normal size, shape &echotexture with no focal lesions or related cysts. Normal amount of peri-testicular fluid with no evidences of significant hydrocele.

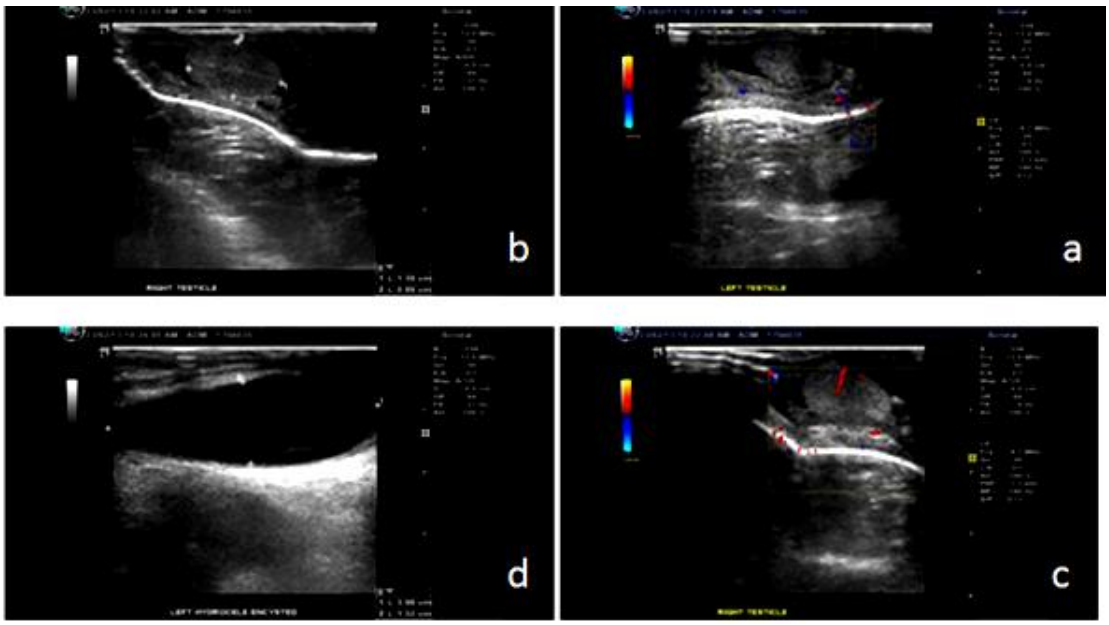


Images (25) shows testicular image of 29years.The right testicle appears normal in shape and echogenicity with no focal testicular lesion could be seen. The left testicle shows slight heterogeneous echogenicity, however, there is no focal testicular lesion could be seen. The left side vascularity is slightly increase

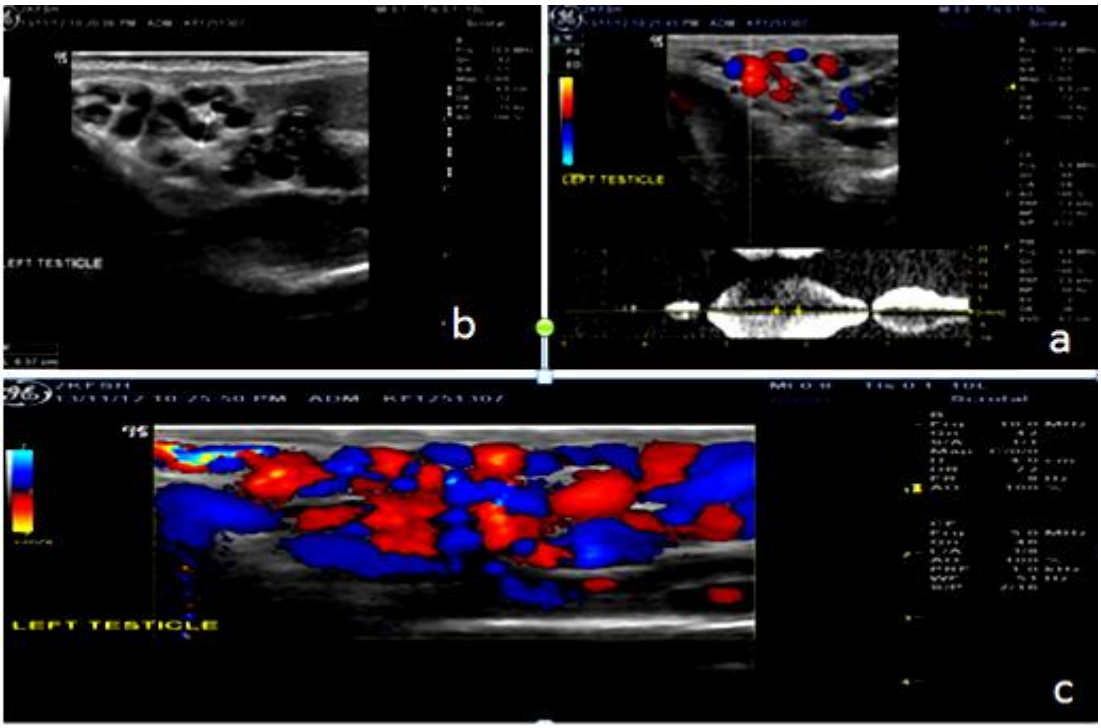
compared to the right one. Both epididymal heads appears unremarkable. No hydrocele. No significant varicocele could be seen. Impression: Mild increase left side vascularity with slight heterogeneous echogenicity. This could be related to infective process (orchitis). For clinical correlation.



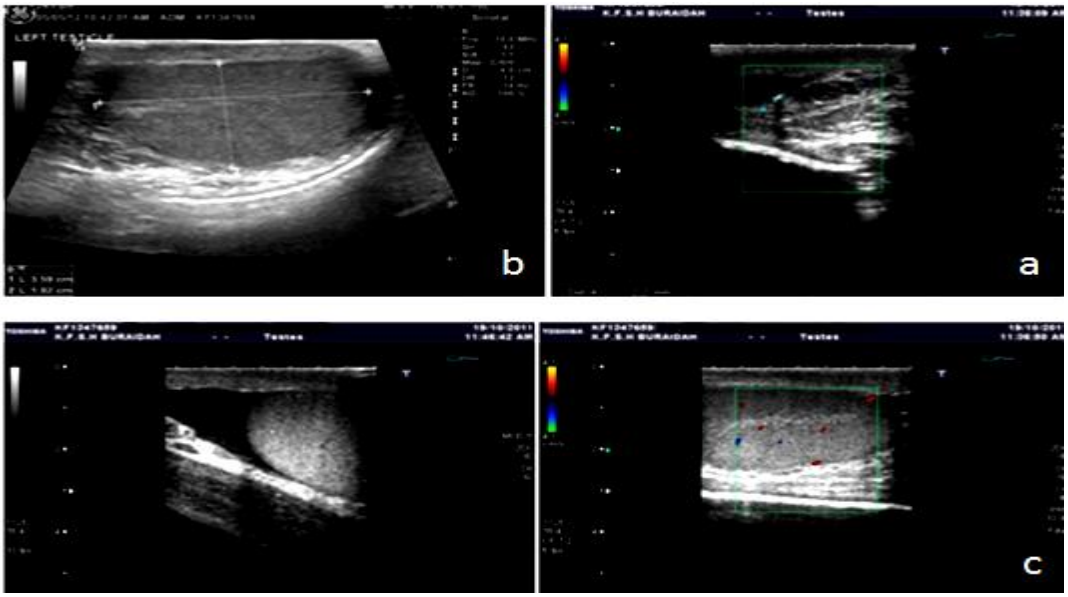
Images (26) shows testicular image of 23 years .The right testis is of normal size and echogenicity with no evidence of focal lesion which measuring 4.4 x 2.5 cm. The right epididymis is of normal size measuring about 0.6 x 0.6 cm while the left is measuring about 4.1 x 2.3 cm with increase vascularity consistent with orchitis, however, the epididymis is replaced by large cyst measuring about 1.7 x 1 cm. No evidence of varicocele. Impression: Left orchitis



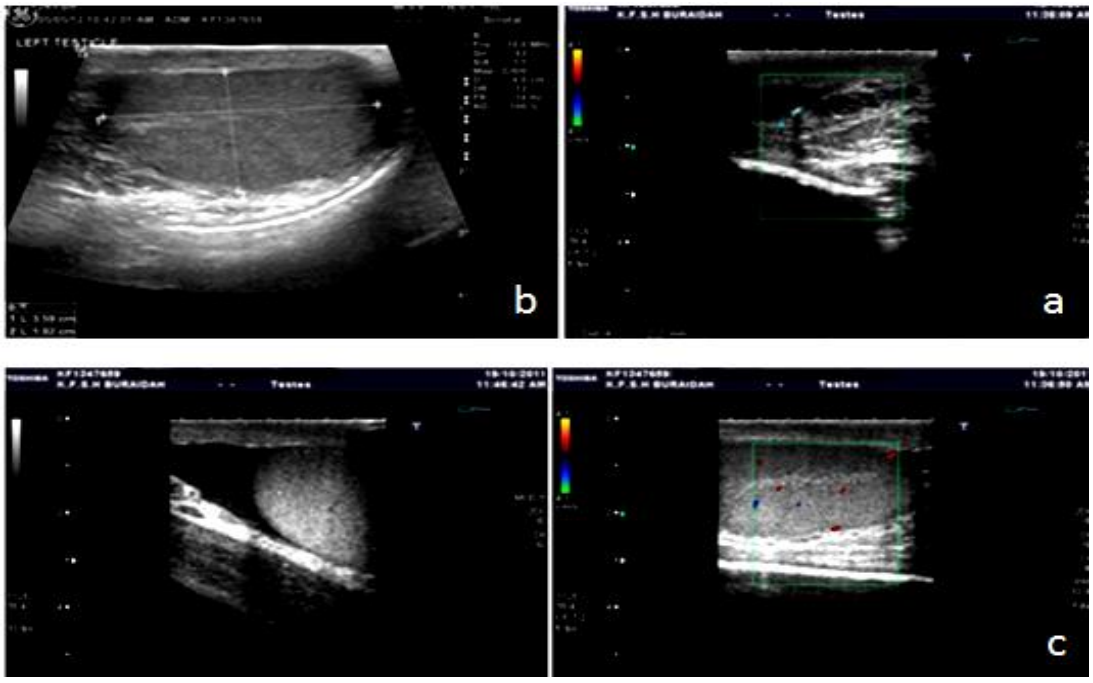
Images (27) shows testicular image of 24 years. Both testes appear normal in size and echopattern. No focal lesions detected. Right testicle = 1.4 x 0.9 cm. Right epididymis = 0.71 x 0.51 cm. Left testicle = 0.9 x 0.64 cm. Left epididymis = 0.56 x 0.4 cm. Well defined cystic lesion with internal septation seen in the lower part of the left inguinal region extending to the left hemiscrotum measuring about 4 x 1.3 cm which mostly representing encysted hydrocele. Impression: Well defined cystic lesion with internal septation seen in the lower part of the left inguinal region extending to the left hemiscrotum mostly representing encysted hydrocele.



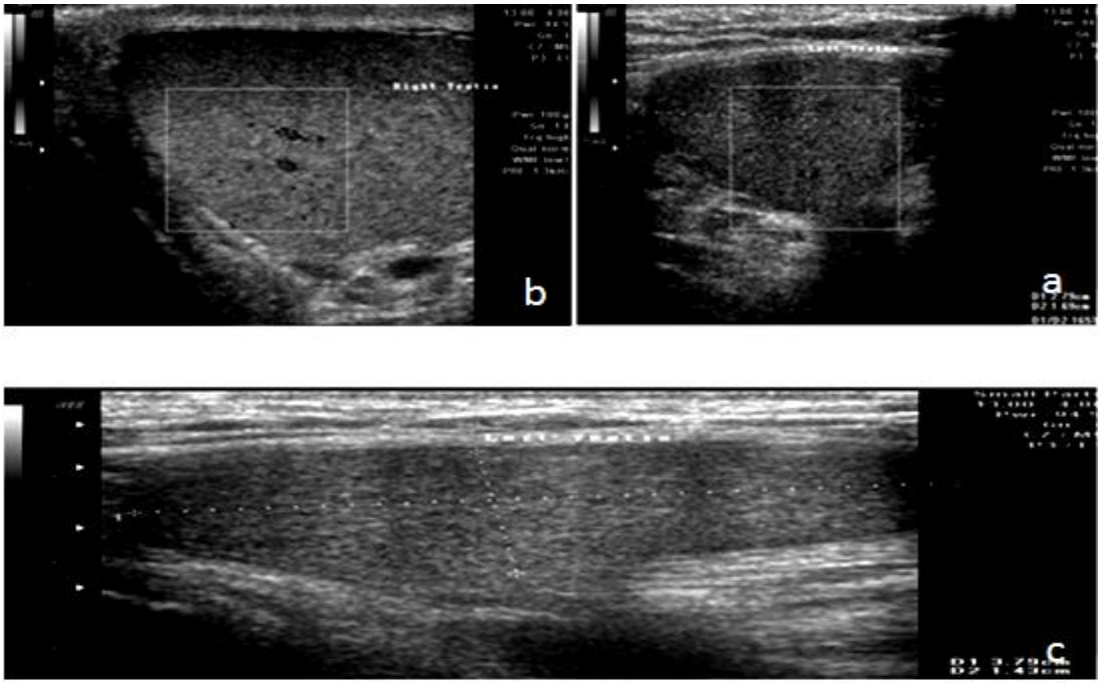
Images (28) shows testicular image of 18 years. Both testicles show average size, shape &echotexture with no evidences of hypo, or hyper echoic lesions. Epididymis show average size, shape &echotexture with no focal lesions or related cysts. Average amount of peri-testicular fluid with no evidences of hydrocele. No spermatocele.By Duplex study left testicular veins are markedly increased calibers reaching up to 5mm at maximum diameter on Valsalva manouver& shows reflux with valsalva.Marked left varicocele. Increased testicular arterial flow is noted at the right testicle



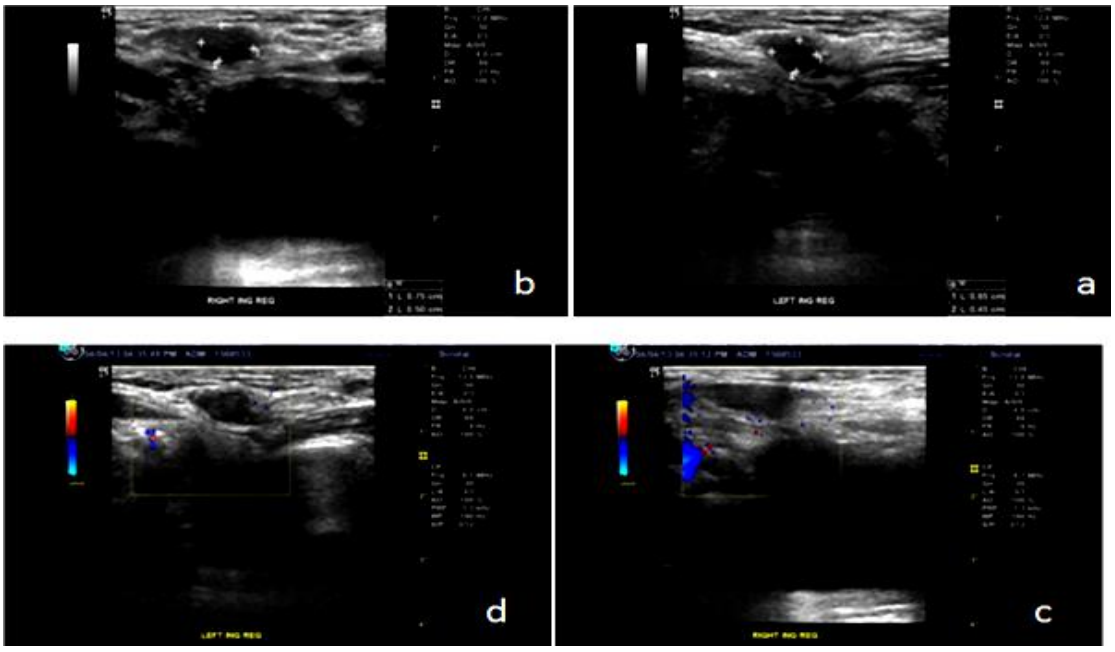
Images (29) shows testicular image of 28 years. Testicles&epididymises are of normal size &vascularity. Evidence of testicular microlithiasis seen for follow up. Calcific changes seen in the epididymis & testicular appendage. Ductectasia of the rete testis seen with similar changes in the epididymis. Turbid minimal hydrocele.



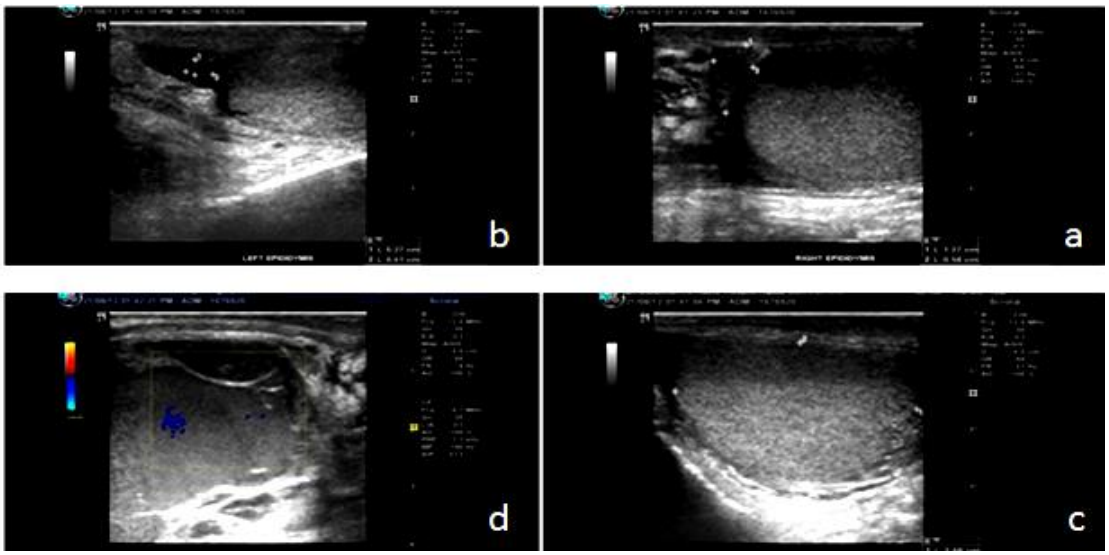
Images (30) shows testicular image of 28 years patient. Left testicles &epididymises are of normal size &vascularity. Evidence of testicular microlithiasis seen for follow up. Calcific changes seen in the epididymis & testicular appendage. Ductectasia of the rete testis seen with similar changes in the epididymis. Turbid minimal hydrocele.n be moved into the scrotum **(Pillai and Besner, 1998)**.



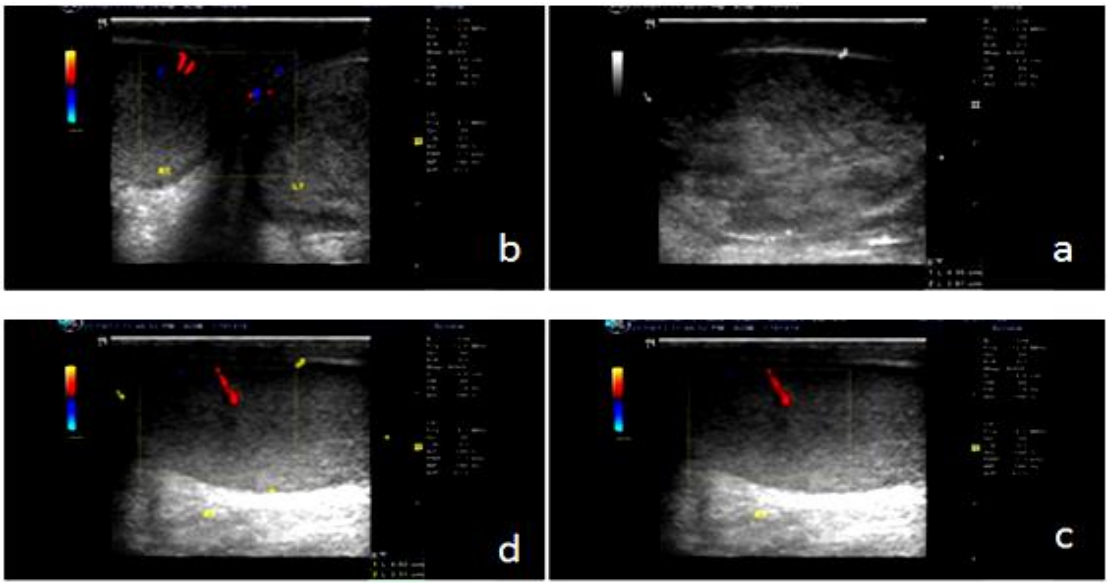
Images (31) shows testicular image of 23 years. Right testis show normal size , uniform echopattern and intact capsules .Left testis show normal size and echo pattern, in inguinal canal position. Normal appearance of both epididymi .No evidence of vaginal hydrocele .No evidence of varicocele .Conclusion : Left undescended testis .



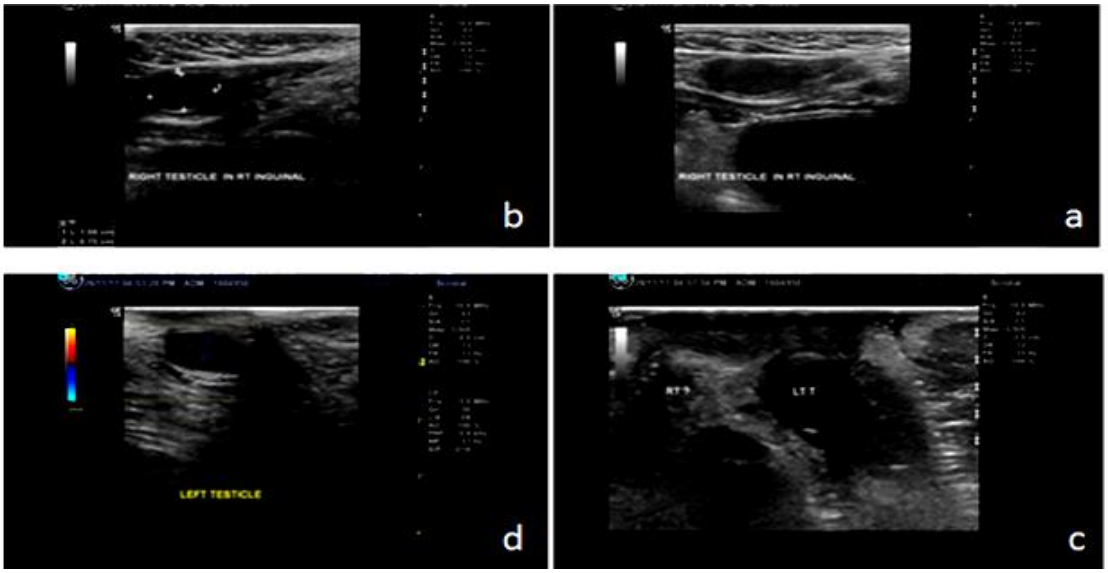
Images (32) shows testicular image of 4 years. Empty scrotal sac is noted. Evidence of oval shape hypoechoic structure seen in the right inguinal region measuring 0.75 x 0.5 cm as well as another one seen in the left inguinal region measuring about 0.65 x 0.45 cm which mostly presenting undescended both testicles.



Images (33) shows testicular image of 81 years. Both testes appear normal in size and echopattern. No focal lesions detected. Right testis = 4.1 x 2.24 x 3.5 cm. Right epididymis = 1.3 x 0.6 cm. Left testis = 3.7 x 2.1 x 3.7 cm. Left epididymis = 0.93 x 0.6 cm. There is a small cyst seen in the left epididymal head measuring about 0.41 x 0.3 cm. There is a large septated cyst seen in the distal part of the right inguinal region extending to the right hemi-scrotum reaching to the upper border of the right testicle with evidence of thick content measuring about 3.5 x 4.44 cm, mostly suggestive of hematoma or collection. Please for clinical correlation and further evaluation



Images (34) shows testicular image of 23 years. Sonographic Findings: The right testis is of normal size and echogenicity with no evidence of torsion, while the left side showed heterogeneous echogenicity which consistent with complete torsion.



Images (35) shows testicular image of 2 years patient. Both testes are within normal size, shape and echogenicity and are in the scrotum. Right testis = 1.3 x 0.6 cm. Left testis = 1.5 x 0.8 cm. There is solitary lymph node seen at the left inguinal region measuring about in its long axis about 1.5 cm which is smooth in its outline and preserved hilum. No ultrasonographically signs of left inguinal hernia.