INDEX PARAMETER	US UROLOGISTS		p-value	UK UROLOGISTS		p-value
	ANDROLOGY TRAINED 74 (23.9%)	NON-ANDROLOGY TRAINED 235 (76.1%)		ANDROLOGY TRAINED 61 (32.4%)	NON-ANDROLOGY TRAINED 121 (64.3%)	
Perform >25 (US) or >15 (UK) vaso-vasostomies per year	29 (39.2)	8 (0.03)	0.0001	15 (24.6%)	5 (4.1%)	0.0001
Insist on or prefer seeing both partners	63 (85.1)	161 (68.5)	0.0046	46 (85.2%)	77 (80.2%)	0.5122
Discuss all options for parenting in detail	60 (81.1)	120 (51.1)	0.0001	34 (63.0%)	42 (43.8%)	0.0277
Fully conversant with criteria for IVF	72 (97.3)	122 (51.2)	0.0001	29 (53.7%)	22 (22.9%)	0.0003
Individualised information about expected outcome	74 (100)	234 (99.6)	1.0000	45 (86.5%)	68 (70.8%)	0.0421
Use loupes intra-operatively	-	50 (21.3)	0.0001	28 (53.8%)	48 (50.5%)	0.7324
Use an operating microscope	74 (100)	184 (78.3)	0.0001	21 (40.4%)	25 (26.3%)	0.0950
Routinely retrieve sperm at the time of vaso-vasostomy	70 (94.6)	160 (68.1)	0.0001	9 (17.6%)	10 (10.4%)	0.3010

Source of Funding: None

1900

TESTOSTERONE USE IN THE MALE INFERTILITY POPULATION: SHORT AND LONGER TERM EFFECTS ON SEMEN AND HORMONAL PARAMETERS

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INTRODUCTION AND OBJECTIVES: In fertile men, exogenous testosterone (T) negatively impacts spermatogenesis and discontinuation leads to recovery. Recovery of spermatogenesis in men who are taking T and are infertile is unknown. In this study we sought to analyze the semen and hormonal parameters in men presenting for male infertility evaluation on T and after T cessation.

METHODS: Men presenting for a fertility evaluation from 2008-2012 on T were identified via a prospectively collected database. Data were analyzed for semen and hormonal parameters while on T and after discontinuation.

RESULTS: 4400 men were evaluated for male infertility and 56 (1.3%) reported being on T at the time of the initial office consult. These men were a medically heterogeneous population, including men with Klinefelters syndrome (8), history of bilateral undescended testicles (7), Kallmans syndrome (5), other causes of testicular failure (6) and men without known pathology using T for athletics (3) or symptoms of T deficiency (17). Of these men, 24 (42.9%) had semen and blood hormone testing only while on T, 26 (46.4%) had testing on T and after discontinuation, and 6 (10.7%) had no testing. 34/50 (68%) tested men were azoospermic while on T at presentation. While on T, the average serum T was 14.74 nmol/L, and sperm count 4.11 M/mL. After T discontinuation, the average T was 11.79 nmol/L, and sperm count 26.84 M/mL. The mean time between measurements was 8.52 months. 10/26 (38.5%) men tested remained azoospermic despite repeated sperm testing for over 6 months. Of these 10 men, 2 had Klinefelters syndrome, 1 had Kallmans syndrome, 1 had Sertoli cell only syndrome, 1 had bilateral undescended testicles, and 1 had chemotherapy-induced azoospermia. If these men were excluded, then 4/20 (20%) without known previous causes for azoospermia were persistently azoospermic following the cessation of T.

CONCLUSIONS: Infertile men on T represent a heterogeneous group with different underlying conditions, many of which could lead to infertility. T cessation resulted in a fairly rapid increase in sperm counts (4.11 M/mL. to 26.84 M/mL). A subset of men with no other cause for the azoospermia remained azoospermic despite T cessation; this may have been present before the men started T and may represent an underlying condition unrelated to the use of T. While men in reproductive years should be discouraged from using T unless medically required, this study is reassuring and indicates that at least 80% of infertile men who have no other cause for azoospermia recover spermatogenesis when T is discontinued.

Source of Funding: None

1901

DEFINING THE UTILITY OF A CLINICAL CARE PATHWAY FOR CLOMIPHENE CITRATE USE IN MEN WITH HYPOGONADISM

Clarisse R. Mazzola, Darren J. Katz, John P. Mulhall, New York City, NY*

INTRODUCTION AND OBJECTIVES: Clomiphene citrate (CC) is an effective treatment for men with hypogonadism (HG). For fear of tachyphylaxis, many clinicians commence CC at low dose and some dose every other day rather than daily. This analysis was undertaken to define if up-titrating dose in men failing to respond to low dose CC is an effective therapeutic approach.

METHODS: Men with a diagnosis of HG (defined by having 2 separate early morning total T (TT) levels <300 ng/dl) opting for CC therapy constituted the study population. Demographic, comorbidity data, physical and laboratory characteristics were recorded. All patients were started on CC 25 every other day (QOD) and were up-titrated to 50mgs QOD and then eventually 50 mgs daily (QD) if the original dose strategy failed. Laboratory testing was conducted 4 weeks after commencement, 4 weeks after a dose change and every six months thereafter. Response was defined as an increase of $\geq$200 ng/dl in TT and a TT level $\geq$400 ng/dl at $\geq$6 months after commencing CC. ANOVA was conducted comparing TT and LH levels among the three dosing groups. Multivariable analysis was performed on patients failing to respond to CC25 QOD to define predictors of successful response to higher doses. Parameters included in the multivariable model were: patient age, mean testicular volume, varicocele presence, baseline TT, free T and LH levels.

RESULTS: 112 patients were included with a mean age $= 45\pm19$ years. Mean pre-treatment testicular volume $= 16\pm8$ mls. Mean baseline T and LH levels were 222 ± 98 ng/dl and 3.8 ± 1.6 (0.1-5.8) IU/ml. On CC25 QOD, 71/112 (63%) patients met the responder definition (TT $= 467\pm190$ ng/dl, LH $= 12.4\pm3.6$). Of the 41 who were up-titrated to C50 QOD, 32% (13) met the responder definition (TT $= 414\pm212$ ng/dl, LH $= 8.2\pm5.2$). Of the 28 moving to CC50 QD, 18% (5) met responder definition (TT $= 366\pm166$ ng/dl, LH $= 7.0\pm1.6$; ANOVA $p=0.033$ for TT, $p=0.025$ for LH). On multivariable analysis, the only factors predictive of response to up-titrating CC were: pre-treatment LH level ($r=0.51$, $p<0.01$) and pre-treatment LH level $\leq$6 IU/ml (RR 2.1, $p<0.01$).

CONCLUSIONS: These data confirm that about two thirds of men with HG meet a robust responder definition using CC25mgs QOD. Up-titrating permitted 44% of patients not responding to CC25 QOD to meet the responder definition. We believe these data support starting CC at low dose and up-titrating when appropriate giving patients realistic expectations when the latter is necessary.

Source of Funding: None

1902

DO VARICOCELE AND ITS REPAIR AFFECT SERUM TESTOSTERONE LEVELS IN INFERTILE MEN? RESULTS OF A PROSPECTIVE CONTROLLED STUDY

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INTRODUCTION AND OBJECTIVES: To determine influence of clinical varicocele and varicocele repair on serum total testosterone (T) in infertile men; and to identify variables correlating with T-changes.

METHODS: Prospective non-randomized 3-group controlled-study; involving varicocele-repair (VR), varicocele-control (VC) and normal-control (NC) groups; incorporating men aged 20-50 yr. VR included infertile men undergoing subinguinal magnified varicocelectomy. Fertile men with non-repaired palpable varicocele comprised VC. Healthy fertile men without varicocele constituted NC. Considering our laboratory T-minimum value, we stratified VR and VC into above-minimum (AM) or below-minimum (BM). Main Outcome measurements were changes from baseline-T in varicocele men after 3-and-6-months. NC T-levels were used for baseline comparison. Student-t-, Wilcoxon-

matched-pairs, Mann-Whitney and ANOVA tests were used. Post-varicocelectomy T-changes were correlated with patients' variables. Two-tailed $P<0.05$ was significant.

RESULTS: We analyzed 66 (VR), 33 (VC), and 30 (NC) men with insignificant demographic differences. Baseline-T means (SD) in VR, VC and NC were 12.06 (4.6), 13.76 (5.72) and 17.4 (5.0) nmol/l; respectively. Baseline-T of VR and VC were comparable ($p=0.22$); whereas they were significantly low compared to NC ($p=0.0001$; $p=0.001$, respectively). VC exhibited non-significant T-changes; whilst VR demonstrated significant improvement (12.9%; mean difference=1.55 [95% CI=1.04-1.06] nmol/l; $p=0.0001$). Changes were more obvious in BM (58.9%; mean difference=4.3 [95% CI=3.6-5.0] nmol/l; $p=0.0001$) compared to AM (3.14%; mean difference=0.44 [95% CI=0.18-0.7] nmol/l; $p=0.002$). T-changes post-varicocelectomy significantly correlated positively with baseline-T ($r=0.787$; $p=0.0001$). Correlation was stronger and more significant among AM ($r=0.947$; $p=0.0001$) than BM ($r=0.547$; $p=0.015$). T-improvements exhibited significant positive correlation with pre ($r=409$; $p=0.001$) and post-operative ($r=0.352$; $p=0.004$) sperm concentration. No other variable demonstrated significant correlation.

CONCLUSIONS: Testosterone is low in varicocele men compared to normal control. Varicocelectomy yields significant T-improvement; correlating positively and significantly with baseline-T and sperm concentrations. Yet, with lower baseline-T, improvement is more pronounced. T-improvement might have role in predicting improved fertility potential. Should low testosterone be considered indication for varicocelectomy remains to be determined.

Source of Funding: None

1903

LOUPE ASSISTED VERSUS MICROSCOPICAL VARICOCELECTOMY: DO THEY HAVE INTRAOPERATIVE ANATOMIC DIFFERENCE?

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INTRODUCTION AND OBJECTIVES: Several papers reported that microscopical varicocelectomy was superior than loupe assisted varicocele repair. However, in the same spermatic cord, the intraoperative anatomic detail difference between them is still unclear.

METHODS: Between April 2011 and August 2011, 26 men with 33 sides grade 2-3 varicocele were enrolled in this study. One surgeon firstly performed the open inguinal varicocelectomy under 3.5 × loupe magnification; the presumed vascular channels and lymphatics were isolated and marked respectively without ligation any of them. Another surgeon then microsurgically dissected and checked the same spermatic cord with operating microscope to judge the results in terms of the ligation of the internal spermatic veins, the preservation of the arteries and lymphatics. At last, all the internal spermatic veins were ligated microsurgically.

RESULTS: There were significant differences in the average number of internal spermatic arteries (1.51 v.s. 0.97), internal spermatic veins (5.70 v.s. 4.39) and lymphatics (3.52 v.s. 1.61) between microscope and loupe assisted procedure ($P<0.001$, $P<0.001$, $P<0.001$, respectively). Meanwhile, in varicocele repair with loupe magnification, an average of 1.30 ± 1.07 (43/33) internal spermatic veins per side were missed (among them, 1.12 ± 0.93 (37/33) overlooked internal spermatic veins were adherent to the preserved testicular artery), the number of 0.55 ± 0.79 lymphatics and 0.36 ± 0.55 arteries were to be ligated.A total of 5 internal spermatic arteries and an average number of 1.67 ± 1.43 lymphatics were neither identified nor ligated in varicocelectomy using magnifying loupe. In addition, in 1 case the vasal vessels were to be ligated in this approach.

CONCLUSIONS: Loupe magnification is very useful in open varicocele repair; but microscopical varicocelectomy could preserve more internal spermatic arteries, lymphatics, and ligate more veins than loupe assisted procedure. To some degree loupe magnification is inadequate for the reliable identification and dissection of the tiny vessels of the spermatic cord, most of the overlooked veins were adherent to the preserved testicular artery. However, further control study is needed to compare the clinical outcome.

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Kidney Cancer: Advanced (II)

Moderated Poster Session 70

Tuesday, May 7, 2013 **3:30 PM-5:30 PM**

1904

THE IMPACT OF NON-CLEAR CELL HISTOLOGY ON OUTCOME FOR PATIENT WITH RENAL CELL CARCINOMA AND VENOUS TUMOR THROMBUS

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INTRODUCTION AND OBJECTIVES: The importance of tumor histology on outcome in renal cell carcinoma (RCC) remains in debate. Indeed, while several series have demonstrated adverse outcomes for patients with clear cell RCC (ccRCC) compared with non−ccRCC in the setting of localized disease, the significance of histology for advanced renal tumors has not been well established. We evaluated the impact of histology on outcome for patients with RCC and venous tumor thrombus (VTT).

METHODS: We identified 807 patients with RCC and VTT who underwent nephrectomy at our institution between 1970−2008. All specimens were re−reviewed by a single genitourinary pathologist. Patients with non−ccRCC VTT (n=56) were matched 1:2 to patients with ccRCC VTT based on grade, presence of sarcomatoid differentiation, VTT level, lymph node status, metastatic status, and symptoms at presentation. Survival was estimated for each cohort using the Kaplan Meier method and compared with the log−rank test.

RESULTS: The 56 non−ccRCC VTT included 26 papillary RCC, 11 chromophobe RCC, 5 collecting duct tumors, and 14 RCC not otherwise specified. 28 patients with non−ccRCC VTT had a renal−vein only thrombus, while 9, 11, 4, and 4 patients had a level I, II, III, and IV VTT, respectively. Interestingly, compared to the overall cohort of patients with ccRCC VTT, patients with non−ccRCC VTT presented with larger mean tumor size (11.5 cm vs 9.9 cm;$p=0.02$), higher nuclear grade (91% grade 3/4 vs 81%;$p=0.04$), more frequent sarcomatoid differentiation (25% vs 9%;$p<0.001$), and more frequent lymph node involvement (38% vs 13%;$p<0.001$). Median postoperative follow−up was 12 years (range 3−15) for patients with non−ccRCC VTT and 6.6 years (range 0−13) for the matched patients with ccRCC VTT. Among matched patients who initially had cM0 disease, 5−year metastases free survival was not significantly different with ccRCC VTT (34%) and non−ccRCC VTT (41%; $p=0.24$). Likewise, 5−year CSS for the cohort with non−ccRCC VTT was 25%, versus 27% for the matched group with ccRCC VTT ($p=0.97$).

CONCLUSIONS: Patients with non−ccRCC and VTT present more frequently with adverse pathologic features. However, we found no significant difference in survival for patients with RCC and VTT based on histology. Aggressive surgical resection represents the mainstay of treatment in these cases, while continued efforts to optimize a multi−modal management approach to such patients remain necessary.

Source of Funding: None