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high risk of embryo aneuploidy with an OR of 4.1 (CI: 2.2-7.7, P<0.001) and (OR: 1.7, CI: 1.01-3.0, P=0.048), respectively. Logistic regression analysis revealed maternal age and type C TE had the major risk factors for aneuploidy. Among combinations of factors (table 1), the best marker for the risk of aneuploidy was maternal age above 38 years combined with an embryo with trophectoderm type C, which had a positive predictive value of 88.6% and specificity of 97.5%.

CONCLUSIONS: The trophectoderm and inner cell mass type C are the major embryo risk factors for aneuploidy, explaining approximately 71% and 60% of the risk, respectively. Among clinical factors, advanced maternal and paternal age (greater than 38 and 36 years, respectively), antral follicle (<5), and low percentage of sperm with normal morphology increased the risk of embryonic aneuploidy.

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IS UNIVERSAL SCREENING OF IVF PATIENTS FOR SARSCOV-2 JUSTIFIED? Daniel S. Seidman, MD,1 Arik Kahan, MD,2 Adrian Shulman, MD,1 Eyal Schiff, MD,1 Tal Shavit, MD1 Assuta Medical Center, Rishon-Lechayal, Tel-Aviv, Israel;2 Assuta Medical Center, Rishon-Lezion, Israel.

OBJECTIVE: Resuming all ART treatments in Israel, following the COVID-19 lockdown put into effect on March 22, 2020, was fraught with concern, as the pandemic is still raging. One of the safety measures implemented was universal screening for SARS-CoV-2 of all ART patients. Our aim was to assess the usefulness of this measure.

DESIGN: Cohort study.

MATERIALS AND METHODS: All women initiating ART treatment from May 1st, through July 17, 2020, at one of the two IVF Units of the Assuta Medical Centers, were required to undergo screening with nasopharyngeal swabs and a quantitative polymerase-chain-reaction test to detect SARS-CoV-2 infection. All women with symptoms of Covid-19 or those with recent exposure to an infected person were not allowed to commence ART treatment. Since almost all of the IVF cycles performed at our centers are fully covered by the Israeli national health insurance, treatment is very accessible, and thus we believe that our sample is representative of the country’s COVID-19 prevalence.

RESULTS: A total of 4,259 asymptomatic women underwent ART treatments at the Assuta Medical Centers, 2,787 ovum pick-ups and and 1,472 frozen embryo transfers. Overall, 23 women (0.54%) tested positive for SARS-CoV-2. The rate of women who tested positive was similar in our IVF center in Tel-Aviv, 11 of 2,299 women (0.48%), and in our more southern Rishon Lezion center, 12 of 1,970 (0.61%). An additional 11 women had to cancel their IVF treatment as their male partner was test positive for SARS-CoV-2. Only a fifth of the positive patients came from cities declared by the Ministry of Health as Covid-19 hotspots.

CONCLUSIONS: Our use of universal SARS-CoV-2 testing in all ART patients initiating ART treatment revealed that at this point in the pandemic in central Israel, one in 200 asymptomatic women starting an ART treatment cycle was positive for SARS-CoV-2. This ratio is approximately 10 times lower than the current rate among women screened in Israel due to Covid-19 related symptoms or exposure to a positive person. The potential benefit of universal testing for Covid-19 includes the ability to protect patients and health care staff during these challenging times by lowering the risk of novel coronavirus exposure in the ART clinic. However, universal screening may burden the limited testing resources and may lead to less vigilant use of personal protective measures.

SUPPORT: None

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CAN WE DIAGNOSE ENDOMETRIOSIS WITH A PHONE APP? NEZHAT ENDOMETRIOSIS ADVISOR MOBILE APPLICATION AS A PREDICTOR FOR ENDOMETRIOSIS IN PATIENTS EXPERIENCING PELVIC PAIN, INFERTILITY OR UNEXPLAINED INFERTILITY Janelle M. Jackman, MBBS,1 Anuj Vaid, BA1 Shruti Agarwal, DO1 Azadeh Nezhad, MD1 Camran Nezhad, MD1 Camran Nezhat Institute, Center for Special Minimally Invasive and Robotic surgery, Stanford University Medical Center, Palo Alto, CA;2 Drexel University, Philadelphia, PA;3 Camran Nezhat Institute, Center for Special Minimally Invasive and Robotic surgery, Stanford University Medical Center, University of California San Francisco, Palo Alto, CA.2

OBJECTIVE: Endometriosis has a debilitating impact on women’s lives, including severe pain, infertility and interference with daily life. For most women with endometriosis, the diagnosis is often missed, misdiagnosed and it is usually takes years before the right diagnosis is made. The first step in reversing the adverse sequelae on endometriosis is to promptly and accurately diagnose it. Unfortunately, there is usually a delay especially in women with lower socioeconomic background as the diagnosis is made surgically. Our study is to evaluate the positive predictive value (PPV) of Nezhat Endometriosis Advisor mobile application questionnaire as a noninvasive screening test for the diagnosis of endometriosis in patients experiencing severe or chronic pelvic pain, recurrent pregnancy loss, or unexplained infertility.

DESIGN: Retrospective study design.

MATERIALS AND METHODS: Retrospective cohort study at a university-affiliated private practice. Inclusion criteria were women who had no previous surgical diagnosis of endometriosis who utilized the app and was scheduled for laparoscopic surgery due to history. Patients then underwent laparoscopic surgery with an indication of diagnosing and treatment of suspected endometriosis. The primary outcome measured was the PPV of Nezhat Endometriosis Advisor mobile application questionnaire to the surgical diagnoses of endometriosis. Statistical analysis was performed using SPSS v.25.0.

RESULTS: 30 patients met the inclusion criteria so far for our on going study. 95.0% of patients who had a screening test result of 90% or more on the app, had a surgical pathology confirmed diagnosis of endometriosis. However 100% of the patients who had a screen result of >90% on the app, had visual diagnosis of endometriosis at different stages at the time of surgery. The 8% who did not have pathological confirmation of endometriosis, had fibrosis diagnosed which may be due to late presentation of endometriosis example burnt out endometriosis presentation. The PPV of the screening questionnaire for endometriosis was 95.0%. In patients with app scores between 75-90%, pathology confirmed endometriosis 80% of times. Few patients who had diagnostic surgery despite low scores, endometriosis was confirmed in less than 10% of the cases. All patients had complete resolution or improved symptomatology after surgery.

CONCLUSIONS: Nezhat Endometriosis Advisor mobile application questionnaire has a high PPV of 95% for diagnosing endometriosis and can help identify a patient population that may require surgical treatment for pelvic pain or unexplained infertility. This will be helpful as it may lead to earlier presentation of endometriosis which will help with treatment and management. This is also very beneficial to patients in lower socioeconomic demographics who may not have easy access to healthcare and may otherwise suffer for a long time with pain or infertility before a diagnosis is made. More research is needed to determine the continued accuracy of the app in different patient populations and demographics.

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A COMPREHENSIVE COVID-19 RISK MITIGATION STRATEGY FOR SAFE PATIENT CARE AND STAFF WELLNESS DURING A GLOBAL PANDEMIC. Mandy G. Katz-Jaffe, PhD,1 Lauren Henry, BS,1 Nathan McCubbins, BS,1 Rachel Tucci, BS,1 Rachel S. Mann, BS, MS,1 Susanna McReynolds, PhD,1 William B. Schoolcraft, MD1 Colorado Center for Reproductive Medicine, Lone Tree, CO;2 CCRM Colorado, Lone Tree, CO.

OBJECTIVE: In the midst of the COVID-19 epidemic and the estimation that the vast majority of the population remains susceptible to SARS-CoV-2 infection, a comprehensive risk mitigation strategy to identify asymptomatic and pre-symptomatic carriers is key to providing safe clinical care during ART treatment. The objective of this study was to evaluate the efficiency of a combined triage protocol and molecular testing for active SARS-CoV-2 viral infection for both patients and staff from a multi-site IVF network.

DESIGN: Prospective study.

MATERIALS AND METHODS: A symptomatic triage was performed on all patients initiating ART treatment. The objective of this study was to evaluate the efficiency of a combined triage protocol and molecular testing for active SARS-CoV-2 viral infection for both patients and staff from a multi-site IVF network.

RESULTS: A total of 30 patients met the inclusion criteria so far for our ongoing study. 95.0% of patients who had a screening test result of 90% or more on the app, had a surgical pathology confirmed diagnosis of endometriosis. However 100% of the patients who had a screen result of >90% on the app, had visual diagnosis of endometriosis at different stages at the time of surgery. The 8% who did not have pathological confirmation of endometriosis, had fibrosis diagnosed which may be due to late presentation of endometriosis example burnt out endometriosis presentation. The PPV of the screening questionnaire for endometriosis was 95.0%. In patients with app scores between 75-90%, pathology confirmed endometriosis 80% of times. Few patients who had diagnostic surgery despite low scores, endometriosis was confirmed in less than 10% of the cases. All patients had complete resolution or improved symptomatology after surgery.

CONCLUSIONS: Nezhat Endometriosis Advisor mobile application questionnaire has a high PPV of 95% for diagnosing endometriosis and can help identify a patient population that may require surgical treatment for pelvic pain or unexplained infertility. This will be helpful as it may lead to earlier presentation of endometriosis which will help with treatment and management. This is also very beneficial to patients in lower socioeconomic demographics who may not have easy access to healthcare and may otherwise suffer for a long time with pain or infertility before a diagnosis is made. More research is needed to determine the continued accuracy of the app in different patient populations and demographics.

References: 1) Nezhat C, Vang N, Tanaka PP, Nezhat C. Optimal Management of Endometriosis and Pain. Obstet Gynecol 2019; 134:834-839.
2) Nezhat C, Nezhat F, Nezhat C. Endometriosis: ancient disease, ancient treatments. Fertility and Sterility 2012; 98:S1- S62.
3) Agarwal SK, Chapron C, Giudice LC, et. al. Clinical diagnosis of endometriosis: a call to action AJOG 2019; 220:354.e.1 - 354.e.12.
19 symptoms or if they had been in contact with someone suspected or confirmed to be positive for the virus. Only patients determined to be at low risk for COVID-19 were allowed to enter the clinic for fertility treatment. Both patients and staff were required, upon arrival at the clinic, to wear a mask and complete a symptom-based questionnaire, record body temperature, and keep a safe social distance of more than 6 feet at all times. Any individual recording a fever over 100.4 °F and/or two or more symptoms was instructed to stay/return home for self-quarantine. Specimen collection for viral screening involved an anterior nare sampling method and storage in a FDA approved viral transport medium. Viral RNA was isolated using the MagMAX™ Viral/Pathogen II (MVP II) Nucleic Acid Isolation Kit (Thermo Fisher Scientific). Molecular testing for active SARS-CoV-2 viral RNA infection was performed using the FDA emergency use authorized TagPath™ RT-PCR COVID-19 test (Thermo Fisher Scientific) for every patient within 3-5 days prior to oocyte retrieval or an attempt to achieve a pregnancy, and for all staff bi-weekly. Positive cases were reported to each respective local State Health Department.

RESULTS: Of 2,074 patients tested for COVID-19 between May and July 2020 across nine fertility clinics in the US, only 3 (0.15%) were found to be positive for SARS-CoV-2 viral RNA infection. In all cases the patients were asymptomatic and passed the triage protocol. PCR testing of staff bi-weekly identified 6 positive cases. All but one indicated having one or two mild symptoms. There were no recorded community transmissions among either patients to staff or between staff members.

CONCLUSIONS: A comprehensive risk mitigation strategy that includes a combined triage protocol, safe social distancing and molecular testing for active SARS-CoV-2 viral RNA infection in both patients and staff enables early detection and isolation of infected asymptomatic or pre-symptomatic individuals, thereby creating a safe environment for patient care and staff welfare during the global COVID-19 pandemic.

SUPPORT: None

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SEMINAL TEX-101 MAY PREDICT RESTORATION OF SPERMATOGENESIS AFTER VARICOCELECTOMY IN AZOOSPERMIC MEN WITH PALPABLE VARICOCELE. Ahmed Mohamed El Guindi, MD,1 Mina Saad, MS,1 Zeinab Nour, M.D,2 Hamed Abdallah Hamed, M.D,2 Mohamed Wael Ragab, M.D1 Cairo University, Cairo, Egypt; 3Cairo University, Cairo, Egypt.

OBJECTIVE: Around 40% of men with non-obstructive azoospermia (NOA) and palpable varicocele may benefit from varicocelectomy with appearance of sperms in ejaculate. Testicular histopathology predicts the outcome of varicocelectomy and men with hypospermato genesis or late maturation arrest have better prognosis compared to men with early maturation arrest or Sertoli cell only (SCO) syndrome.

Testis expressed protein (TEX-101) is a seminal plasma protein that shed from testicular germ cells and it has been found to be significantly lower in men with SCO in compare with other NOA subtypes.

We aimed to assess the predictive role of seminal TEX-101 in recovery of sperms in ejaculate after varicocelectomy.

DESIGN: Prospective cohort.

MATERIALS AND METHODS: Forty male patients with NOA and palpable bilateral varicocele were subjected to seminal TEX-101 by ELISA (Wuhan Fine Biotech Co., Ltd. China), serum gonadotropins and total testosterone evaluation, followed by sub-inguinal microsurgical varicocelectomy. Two seminal analyses were performed in 3- and 6-months follow-up periods to assess appearance of sperms in ejaculate.

Mann Whitney test was used to compare pre-operative seminal TEX-101, FSH, LH and testosterone between the group of men with observed sperms in ejaculate during follow-up (group 1) and men with persistent azoospermia (group 2). Receiver operating curve (ROC) test was used to calculate a cut-off value and diagnostic indices (sensitivity and specificity) of pre-operative seminal TEX101.

RESULTS: After varicocelectomy, spermatozoa were found in the ejaculate of 10/40 (25%) through the follow-up 17 patients at the 3-months follow-up and additional 3 patients at 6-months follow-up). In these ten patients (G1), no significant differences were observed in pre-operative testicular volume or serum testosterone levels in compare with patients with persistent azoospermia during follow-up period (G2).

Pre-operative seminal TEX-101 was significantly higher in G1 in compare with G2 (p = 0.014), while serum FSH and LH were significantly higher in G2 (p = 0.001, p = 0.01 respectively), as shown in table (1).

| TABLE (1). |
|-----------|
| TEX101 (ng/ml) | FSH (mIU/ml) | LH (mIU/ml) | Total testosterone (nmol/L) |
|-----------|
| G1 (n=10) | G2 (n= 30) | G1 (n=10) | G2 (n= 30) |
|-----------|
| 13.5 (7.5-22.3) | 9.8 (2.8-18.2) | 0.014 |
| 5.1 (3.5-9.2) | 15.9 (3.5-31.2) | 0.001 |
| 4.2 (2.4-6.5) | 6.3 (2.7-27) | 0.01 |
| 5.1 (2.2-13) | 4.5 (1.9-10.8) | 0.818 |

Data are expressed as median (range). Area under curve using ROC was 0.76 and a cut-off value of ≥ 9.9 ng/ml showed sensitivity of 90% and specificity of 57% in pre-operative TEX-101 prediction of recovery of sperms.

CONCLUSIONS: Pre-operative seminal TEX-101 can be used as a predictor for recovery of sperms in the ejaculate after varicocelectomy in men with NOA and palpable varicocele.

NCT04397887.

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EFFECT OF HORMONAL CONTRACEPTION ON ILLNESS SEVERITY IN WOMEN WITH POSITIVE SARS-COV2 TESTS. Vaidhei Mujumdar, MD,1 Ariel T. Levy, MD,2 Rachel Madding, BA,3 Vincenzo Berghella, MD,1 Johanna Quist-Nelson, MD,4 William D. Schlaff, MD,1 Brent C. Monseur, MD, ScM5 Thomas Jefferson University Hospital, Philadelphia, PA; 6Weill Cornell Medical Center, New York Presbyterian Hospital, New York, NY; 7Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, PA; 8University of North Carolina, Chapel Hill, Chapel Hill, NC; 9Stanford Hospitals and Clinics, Sunnyvale, CA.

OBJECTIVE: To evaluate if hormonal contraception affects illness severity in SARS-CoV2 positive women.

DESIGN: Retrospective cohort study.

MATERIALS AND METHODS: Chart review of reproductive age (12-49 yo) women who tested positive for SARS-CoV2 at a tertiary medical center from March 28-April 27, 2020. Exclusion criterion was pregnancy. Women using hormonal contraception were compared to patients not using hormonal contraception. Patients were not contacted to confirm contraception. The primary outcome was hospital admission rate. Secondary outcomes included a composite score for illness severity and clinical signs of infection (Table 1). Multivariable logistic regression was used to control for differences at baseline. Results are reported as adjusted odds ratio (aOR) with a 95% confidence interval (CI). Calculated p values ≤ 0.05 were statistically significant.

RESULTS: A total of 2044 women were screened for SARS-CoV2. Of the 132 positive women, 46 used hormonal contraception: levonorgestrel IUD (n=9; 19.6%), injectable progestin (n=2; 4.35%), oral progesterin (n=3; 6.52%), oral contraceptive (n=24; 52.1%), transdermal patch (n=4; 8.70%), vaginal ring (n=4; 8.70%) and 86 did not use hormonal contraception. The rate of hospitalization for SARS-CoV2 was low for users than non-users of hormonal contraception (2.3% vs 3.8%, respectively) and was not statistically different between groups. There was no difference between the rate of symptoms and clinical signs of infection between groups.

CONCLUSIONS: Sex hormones may play a significant role in regulating immune response and can impact disease state. We provide preliminary evidence that use of hormonal contraception does not have a significant effect on the illness severity in SARS-CoV2 as measured by hospitalization.