

Study of Influence on Infertility

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ABSTRACT

For objective, analyzing the pathogenesis of infertility patients in Zhengzhou and exploring the relevant influential factors. Method: selecting 264 infertility patients in our hospital and peripheral hospitals in the city from March of 2015 to October of 2016 to carry out relevant investigation & research so as to analyze the major pathogeny and related risk factors of 264 infertility patients. For result, for infertility patients, the occurrence of infertility is common in female whether it is primary or secondary. The primary infertility is usually caused by uterus factors, showing the congenital developmental abnormality of uterus. However, the primary cause of secondary infertility is tubal nowhere, commonly and mainly showing frequent abortion frequency. As to male infertility, the idiopathic infertility is mainly related to asthenospermia while the secondary infertility is mainly related to asthenospermia and oligospermia. Conclusion: clinically, there are more causes of infertility. Thus, the reproductive health education and direction need to be strengthened and completed on the male and female during the child-bearing period, and the timely and professional direction needs to be given to the patients with low incidence of infertility to diagnose and treat as early as possible so as to lower the incidence rate of infertility, worthy of attention.

Infertility usually means that there aren't any contraception measures taken within 1 year, with normal sexual life but without successful pregnancy. It can be divided into primary and secondary. Infertility isn't a single disease but a comprehensive clinical manifestation of multiple diseases. Many factors may cause infertility. As a relatively common problem of gynaecology and obstetrics, it may affect about 10%-15% childbearing couples at least. The common pathogeny causing infertility is ovulation failure, dysspermatisms, fallopian tube abnormality and unexplained infertility infections, etc. The long-term infertility may pose a threat to the harmony and stability of family, bad for the society stability development. According to the overseas study¹, as there are multiple causes of disease of infertility, the premise to carry out effective treatment and prevention is to definite the pathogenesis. Only suiting the remedy to

the case could play an active role in disease treatment and really ensure that the incidence rate of infertility is lowered. Through analyzing the clinical data of 264 infertility patients and combining with investigation and analysis, the pathogenic factors and relevant dangerous factors of infertility are summarized. The report is as follows:

1 Data and method

1.1 General data

according to the analysis on the clinical data of 264 infertility patients, the primary infertility occupies 53.79% (142/264). Therein, the female factor occupies 72.54% (103), male factor occupies 9.15% (13), and unexplained infertility infections occupy 18.31%. The

secondary infertility occupies 46.21% (122/264). Therein, the female factor occupies 77.05% (94), the male factor occupies 9.02% (11) and the unexplained infertility infection occupy 13.92% (28). Age of Narui object is 24-36, (29.32 ± 2.56) age average, with a course of disease of 3-12 years, (7.02 ± 2.10) average. Apart from the patients with mates, or contraception measures and without mental disease, etc., all the objects of study sign in the context of informed consent.

1.2 Method

Referring to the relevant literatures summary, making analysis on the clinical data of 264 infertility couples, and carrying out survey research on the condition of patients by combining the self-designed questionnaire.

1.3 Statistical method

Making an analysis through SPSS 17.0 software, ($\bar{X} \pm s$) adopted for enumeration data, and χ^2 adopted for the

inter-class ratio (%) comparison

As to the check analysis, Logistic regression curve is applied to make the analysis on dangerous factor. There exists the statistical significance once $P < 0.05$ difference occurs.

2 Result

2.1 The etiological analysis of 662 sterility female patients

The pathogenesis of female sterility is mainly the ovulation failure in the patients of primary infertility and secondary infertility, secondly for the fallopian tube diseases. Through the comparison of the patients of primary infertility and secondary infertility in terms of pathogenesis, the difference has no statistical significance ($P > 0.05$). Seeing table 1.

Table 1 Etiological analysis of female infertility

Pathogenesis	Primary infertility (n=103)	Secondary infertility (n=94)	X^2	P
Tubal nowhere	21 (20.39)	29 (30.85)	3.92	0.042
Uterus factors	23 (22.33)	2 (2.13)	3.86	0.048
Pelvic inflammation	18 (17.48)	17 (18.09)	1.23	0.230
Cervix factors	9 (8.74)	14 (14.89)	3.90	0.047
ovario- masses	8 (0.77)	3 (3.19)	3.88	0.049
Immune factors	5 (4.85)	2 (2.13)	3.62	0.058
Endometriosis	2 (1.94)	1 (1.06)	3.59	0.068
Unknown cause	17 (16.50)	26 (27.66)	3.92	0.052

2.2 Etiological analysis of male infertility

There are 24 males in 264 infertility patients, among them, 13 patients of primary infertility and 11 patients of secondary infertility. According to the investigation, the etiological factor in the primary infertility of male is the common etiology of asthenospermia, nonliquefaction of semen and abnormal sperm, etc. However in the male patients of secondary infertility, asthenospermia is the most important cause. Other factors also include the abnormal sperm, oligospermia or aspermatism and immunology factors, etc.

2.3 Logistic regression curve is adopted to make analytical investigation on the relevant dangerous factors affecting male and female infertility

The relevant dangerous factors of female including 4

main dangerous factors of fallopian tubes diseases, immune factors, hypoplasia of uterus and abortion or history of induction of labor and 4 dangerous factors including asthenospermia, non-liquefaction of semen, immune factors, oligospermia or aspermatism, etc. of male infertility, etc. can be regarded as the analysis of dependent variable of Logistic regression curve, and the infertility is taken as the independent variable of regression curve analysis. Thus the correlation analysis can be carried out. The result is that there exists the obvious correlation between fallopian tubes diseases and female infertility in female dangerous factors, and other 3 aspects are also the important dangerous factors causing infertility, while in the male infertility, asthenospermia is closely related to the abnormal sperm, and others are also the important dangerous factors causing infertility. The result is shown in table 2.

Table 2 Making correlation analysis on the main dangerous factors of male and female infertility

Sex	Dangerous factor	Regression coefficient	Standard error	P	OR	95%CI
Female	Tubal nowhere	3.192	3.324	0.000	1.823	1.309-7.240
	Immune factors	2.032	1.240	0.132	0.304	1.202-3.420
	Hypoplasia of uterus	1.980	1.283	0.083	0.085	0.521
	Abortion or history of induction of labor	1.504	0.423	0.000	4.203	2.263-8.240
Male	Asthenospermia	5.432	4.232	0.010	2.634	1.244-7.320
	Abnormal sperm	5.230	3.288	0.036	1.924	1.280-10.032
	Nonliquefaction of semen	1.083	1.860	0.168	0.372	0.022-1.584
	Immune factors	2.240	2.046	0.331	0.543	0.182-2.644
	Oligospermia or aspermatism	1.923	1.742	0.086	0.532	1.430-6.382

3 Discussion

3.1 Analysis of study results

According to the discovery of the study of the clinical examination on 197 females with infertility, the female primary infertility is mainly related to the congenital diseases of uterus, while there exists a bigger correlation between secondary infertility and fallopian tube diseases. Through examination, it is mainly related to tubal nowhere, and block, secondly for pelvic inflammatory diseases, cervicitis and reproductive tract infections related, which basically accords with the previous research results². However, after examination, the proportion that uterine cervicitis, ovario- masses, and vaginal disease cause infertility is relatively lower, which accords with the results of relevant literatures data³. The research reports that the proportion that the cervical disease causes infertility occupying the ratio of infertility is around 5%-10%, and the proportion that the ovarian disease and vaginal disease cause infertility is around 5%-12%. The result also shows that the main factor to cause infertility is the fallopian tube, up to 30% around. After analysis, the reason may be related to oviduct inflammation and injury even occlusion caused by impurity sexual life, recurrent abortion operations, ectopic pregnancy, abuse of contraceptive, etc. According to the foreign report of research⁴, one third of pathogenesis of infertility is caused by fallopian tube diseases. For example, fallopian tube mucosa inflammation may cause fold and adhesion of mucous membrane, intrauterine stenosis and injury of nasal ciliary function. The peritubal inflammation may cause peritubal adhesion, deformation and distortion of fallopian tube, injury of wall muscle, decrease of peristalsis function. Furthermore, the gonococcus or chlamydia trachomatis inflammation infection may aggravate the injury of

mucous membrane of fallopian tube, and effusion may cause occurrence of blockage. Afterwards, the infertility will be caused.

In the study, the male infertility is mainly related to the factors including asthenospermia, abnormal sperm and semen non-liquefaction, etc. Some studies indicate that the incidence rate of male infertility has showed an increasing trend in recent years. The problem is mainly related to the decrease of semen quality and obvious decrease of fertility. After analysis, the reason may be related to the increasing social pressure suffered from by male and the unhealthy behavior and habits including alcoholism, etc. According to the discovery of epidemiology, the male infertility is obviously related to the occupational environment engaged in. Participating in high-temperature service, radioactivity and fitment, etc. may cause injury to the genital system of male, and then the secondary infertility is likely to occur.

3.2 Relative countermeasures

According to the etiological analysis of result of male and female infertility in the study, in terms of primary infertility of female, pathogenesis shall be timely identified, and early detection and treatment shall be carried out so as avoid delaying the optimal opportunity for treatment. For the possible dangerous factors of secondary infertility, the female shall strengthen self-care management, know how to protect themselves and the safe knowledge of sexual intercourse, and avoid unnecessary injury. Excessive sex partners add the risk of genital infections, thus the relevant hygiene work shall be done well. Female is required to carry out periodic physical examination. As to the person without idea of fertility at present, safe contraception measures need to be taken. The contraceptive avoids to be abused to prevent the injury of abortion procedure due to accidental pregnancy on themselves so as to reduce the occurrence

of infertility. The research reports⁵ that, according to the questionnaire on the mental state and personality evaluation of female, 83.3% Chinese infertility female have mental stress with obvious anxiety and heavier depression symptom as well as nervousness and the introverted personality defects. This is an indication that infertility is not only the health problem of genital system but also the social problem. On basis of the fast pace of life and increasing pressure of competition, causing endocrine dyscrasia of human body, the blame and discrimination of the society and family on the infertility patients, etc. cause psychological harm, panic and depression to female, aggravating the occurrence of infertility of female. Male also needs to pay attention to the improvement of unhealthy behavior and habits, like smoking cessation and moderate drinking, etc. For the work environment potentially causing harm to body, self-protection shall be strengthened so as to reduce harm to the minimum. Therefore, it is necessary to carry out relevant periodic reproductive health and health knowledge lecture on psychology, etc. to improve the degree of understanding of right-age male and female, give more respect and encourage to infertility patients, reduce the effect of unfavorable factors and pay more attentions.

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