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Screening of Papanicolaou Smear Outcome in Tikrit's Women

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ABSTRACT

Background: The cancer of cervix is second most common cancer among women.

worldwide. It is have pre malignancy phase , dysplasia (intraepithelial neoplasia) there for its preventable disease . Cervical cytology by Papanicolaou smear is an effective means of screening for cervical premalignant and malignant disease .

Aim of the study :to screen the outcome of Pap Smear in Tikrit's women.

Patients and Methods: Cross section study carried out from January in2017 through December in 2018 on a sample of 95women attending departments of obstetrics and gynecology in Salah Alden general hospital in Tikrit . All studied women were referred for Pap smears.

Results: normal Pap smears were seen in (35 women with negative result and 60 woman with positive result) .only54women with positive result do anther Pap smear after 6 month and 6 woman do total abdominal hysterectomy .after do anther smear 9 of them become negative and 45 diagnosis ca. cervix .

Conclusion: Premalignant and malignant lesions of cervix are not uncommon in referred women especially in menopausal women and those using hormonal contraception. Lesions can be detected early by Pap smear. There is discrepancy, and delay in reporting of Pap smear result, negatively reflected on screening program.

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Introduction:

Cervical cancer is the second most common cancer among women worldwide after the breast cancer is the first commonly occurring⁽¹⁾. The incidence of cervical cancer about 500000 case and two hundred seventy three deaths every year from it⁽²⁾. 80% of new cases diagnosed in underdeveloped countries⁽²⁾. The diagnoses of cancer under developing countries 75% in advance stage, and opposite to developed countries 75% of affected women present in early stage⁽³⁾. Accounts for 6% of female malignancies, global incidence 500 000 new cases/year(UK:2222 new cases in 2004).while in America, greater than 11,000 women are diagnosed with invasive cervical carcinoma per year .The women annually death by cervical cancer over 2,750,000 cases, their ages between 25-64 years worldwide .About 2.4million occur in developing countries and only 0.35 million occur in developed areas. This variation due to the women education ,the inflicted with cervical cancer decrease due to

recognized the symptoms and screening programs for cervical cancer in developed countries⁽⁴⁾ . Awareness about preventable condition ,how can detect and treat the pre- invasive disease ⁽³⁾.

In 1988 established a program to reduce cervical cancer in UK called national health service cervical screening programmer (NHSCSP) therefor the incidence rate reduce to halved in last 20 years in UK⁽²⁾.The women between 25 - 64 years in UK offered cytological screening for cervices every 3 _ 5 years .The major advance to prevent cervical cancer are the vaccination against human papilloma virus (HPV),this is the most cause of cervical cancer ⁽⁴⁾.

Many risk factors for cervical cancer were detected by researches such as cervical infection as human papilloma virus which consider as a main factor, smoking (active and passive), multiple partners, increase parity ,use contraceptive for long period more than five years and sexually relation in young age below 18 yours old ⁽¹⁾ .

According to the etiology of (HPV) infection in cervical cancer has led to adding (HPV) testing to screening in the woman between 25-65 years old, The woman how have symptoms and abnormal screening test or visual lesion in the cervix should be evaluations with colposcopy and biopsy⁽⁵⁾ .

Many strategies' for treatment of cervical cancer depend on the stages of the disease , In early invasive cancer , surgery is choice and in advanced stages ,the radiotherapy in combined with chemotherapy is the standard of care ⁽⁶⁾ .

1.2. Aim:

The aim of this study is to investigate the accuracy of Pap smear in diagnosis of cervical cancer in Tikrit woman.

1.3. Objectives :

The objectives of this study are to:

1. Idintfy the accuracy of Pap smear in Tikrit women .
2. To define the follow up of Pap smear screening in Tikrit women .
3. Investigate the percentage of premalignant and malignant disease of cervix in Tikrit women .

3. Patients and Methods:

The current work represented a cross sectional study, it was conducted in Salah- Aldeen general hospital from 1 January in 2017 to 31 December in 2018. The study included (95) married women experience Pap smear who were chosen by simple random sampling. Their attending gynecological ward in Salah- Aldeen general hospital as patients or their relatives' from different residency (urban and rural areas) of Salah-Aldeen governorate.

The questionnaire was developed to collect all data relevant to socio-demographic factors, questions about the Pap smear screen , follow up program and fate of result . Data presented by simple tables and figures. After that, these data analyzed statistically (chi square) by using SPSS program (version 11) to test the significance of results at p-value less than or equal to 0.05.

Results

The sample in this research was (95)women, all of them were married. The age group was taken from 20 years

old to 65 years old, 60 cases have positive result in first screening of Pap smear and do follow up for 54 only because the another 6 do total hysterectomy from first screen, 35 cases with negative result, only one do another screen.

Table 1 Result of experience of Pap smear.

Pap smear	Follow up		Non follow up		Total
	number	%	number	%	
Positive	54	90%	6	10%	60
Negative	1	3%	34	97%	35
Total	55	59%	38	41%	95

1. The result of Pap smear related to the age :

The study assured that, higher frequency of positive result in women age group (30 to <40) years old and less frequency in age groups (40 to <50) and (60 to 65) years old this relation is not significant at P value ≤ 0.05 as shown in table 2.

Table 2 Distribution the result of Pap smear according to age.

Pap smear result Age (years)	Positive Number %	Negative Number %	Total Number %
20-<30	14 53.8	12 46.2	26 27.9
30-<40	16 57.1	12 42.1	28 30.1
40-<50	8 66.6	5 33.4	13 12.9
50-<60	14 77.7	4 22.3	18 19.4
60-65	8 88.8	2 11.2	10 9.7
Total	60 64.5	35 35.5	95 100

Chi square = 5.70 df=4 P value ≤ 0.05

2.The result of Pap smear related to education:

The result relation of Pap smear to educational level shows higher frequency positive result in high educational level 24(57.1%)women , and less frequency in primary educational level 3(75%)women .This relation is not significant at P value ≤ 0.05 as shown in Table 3 .

Table 3. The relation of Pap smear result and education.

Pap smear result / Educational level	Positive Number	%	Negative number	%	Total Number	%
Illiterate	3	75	2	25	5	100
Primary	13	81.2	4	18.8	17	100
Secondary	20	64.5	11	35.5	31	100
High education	24	57.1	18	42.9	42	100
Total	60	64.5	35	35.5	95	100

Chi square= 3.1 df= 3 P value ≤ 0.05

3.The result of Pap smear related to occupation:

The result of relation shows that positive result is higher frequency in house wife 33(84.6%) women. and relation of positive result of Pap smear and occupation is significant at P value ≤ 0.05 . This shows in Table 4.

Table 4.The relation of result of Pap smear to occupation.

Pap smear result / Occupation	Positive Number	%	Negative Number	%	Total Number	%
Employed	27	50%	28	50%	55	100%
House wife	33	84.6%	7	15.4%	40	100%
Total	60	64.5%	35	35.5%	95	100%

Chi square = 11.85 df= 1 P value ≤ 0.05

4: Relation of Pap smear result according residence.

Table 4.5 shows distribution result of Pap smear according the residence, higher frequency of positive result in urban 31(54.3%) women. This relation is not significant at P value ≤ 0.05

Table 4.5 the relation of the result of Pap smear according the residence.

Pap smear result Residence	Positive	Negative	Total
	Number	Number	Number
	%	%	%
Urban	31	27	58
	54.3	45.7	100
Rural	29	8	37
	80.5	19.5	100
Total	60	35	95
	64.5	35.5	100

Chi square = 6.60 df=1 P value ≤ 0.05

5. The relation between positive results of Pap smear and risk factors.

The study reassure the relation of positive result of Pap smear and risk factors ,Higher frequency risk factor showed that married at young age 29 cases(48%) and less frequency was smoking and STD 2(3%)cases for each one as shown in Figure 1 .

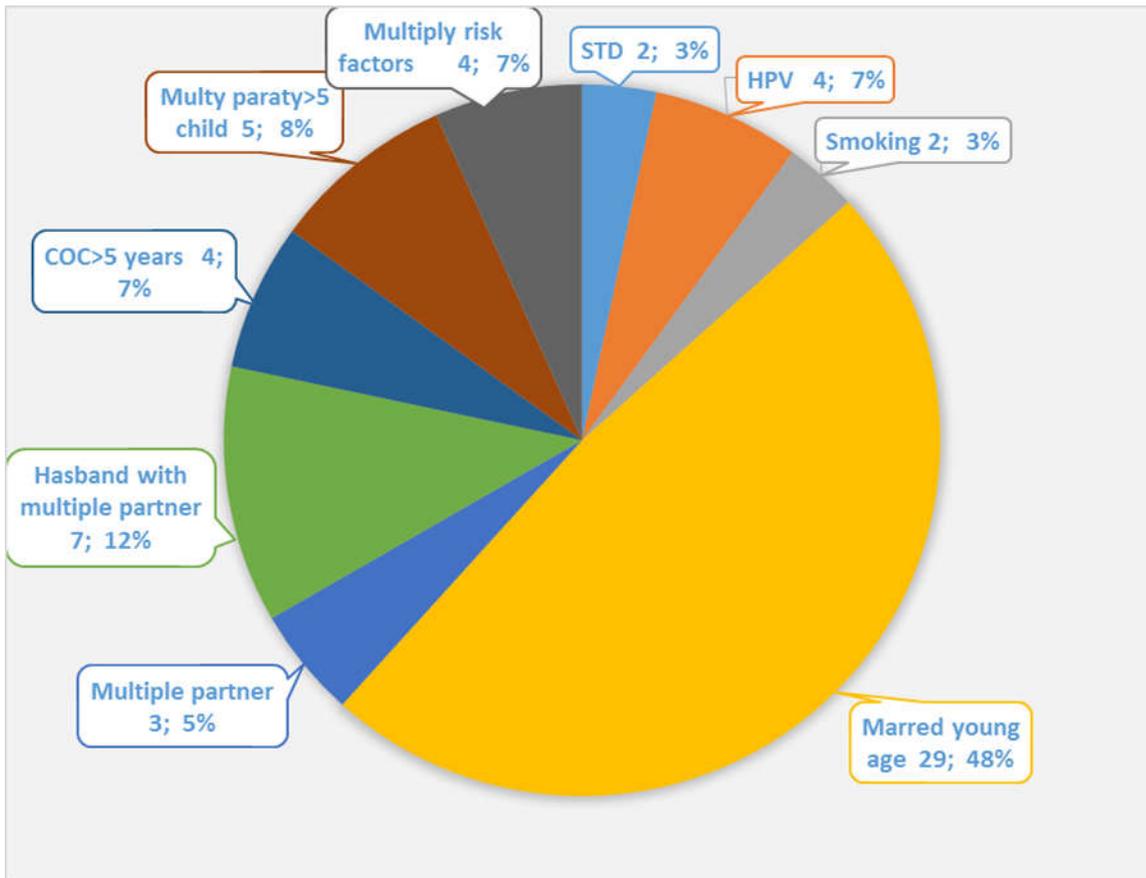


Figure1. The positive result of Pap smear and relation to risk factors.

6 : The fate of positive result of PAP smear and cervical cancer :

The total number of women experience PAP smear were (93) cases, the positive result only (60)cases , six of them (10%) not done follow up because do total hysterectomy(Wertheim hysterectomy) and 54 cases (90%) do fallow up nine of them (16.5%) return to normal cells and 45 cases (83.5%) diagnosed a cervical cancer and need surgical intervention show in figure 2

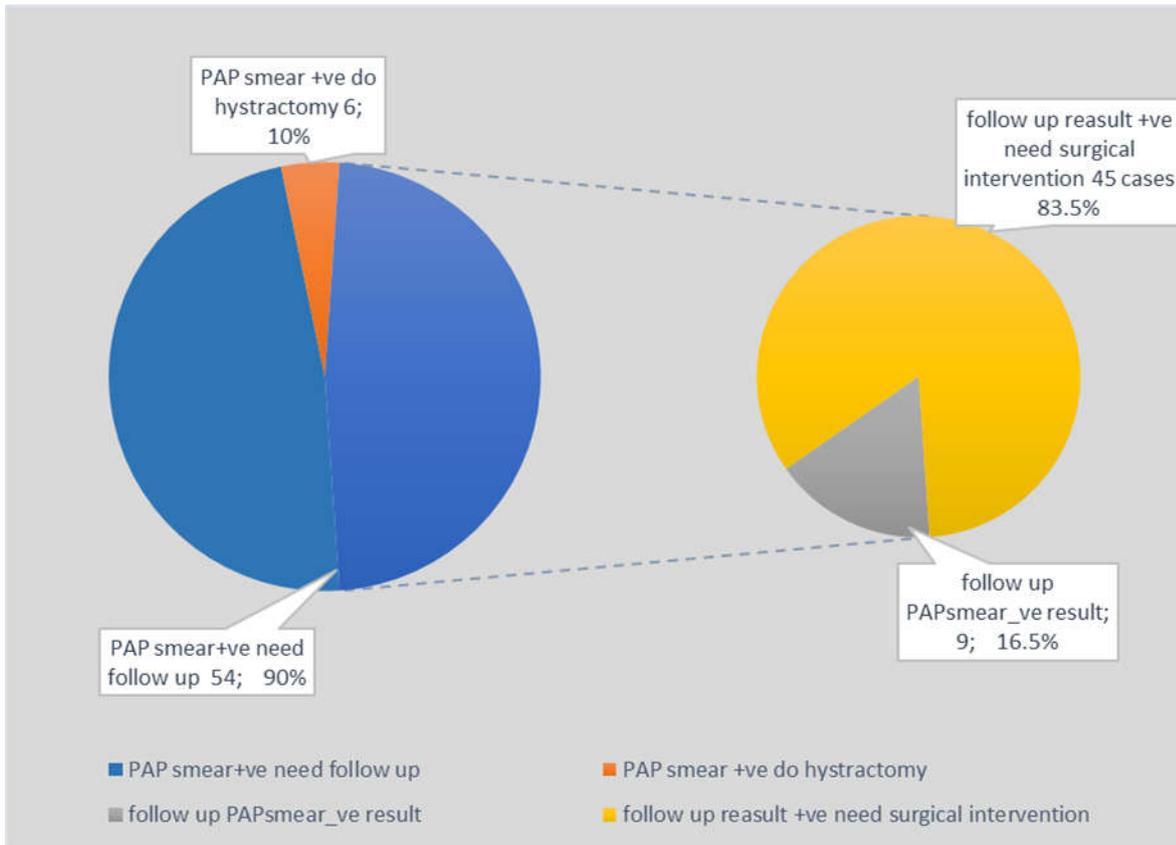


Figure 2. The fate of positive result of PAP smear.

7. The premalignant and malignant disease of cervix diagnosis in followed women related to age.

The relation of diagnosis of cervical cancer with the age was at higher frequency in the age group(30 to < 40)years old 14(87.5%)cases .The relation was not significant at P value ≤ 0.05 . this shows in Table 4.6. _

Table 6 The premalignant and malignant disease of cervix related to age.

Cervical cancer Age	Positive		Negative		Total	
	Number	%	Number	%	Number	%
20-	11	78.5	3	21.5	14	23.4
30-	14	87.5	2	12.5	16	26.6
40-	6	75	2	25	8	13.3
50-	13	92.8	1	7.2	14	23.4
60-65	7	87.5	1	12.5	8	13.3
Total	51	85	9	15	60	100

Chi square=1.87 df=4 P value ≤ 0.05

8. The premalignant and malignant disease of cervix diagnosis in followed women related to education.

Cervical cancer higher frequency in higher educational level 20(83.3%) cases as shown in Table 7 . The relation was not significant P value ≤ 0.05 .

Table 7 The premalignant and malignant disease of cervix related to education level.

Cervical cancer Educational level	Positive Number	%	Negative Number	%	Total Number	%
Illiterate	2	66.6	1	33.4	3	5
Primary	11	84.6	2	15.4	13	21.6
Secondary	18	90	2	10	20	33.4
High education	20	83.3	4	16.7	24	40
total	51	85	9	15	60	100

Chi square = 1.23 df= 3 P value ≤ 0.05

9. The premalignant and malignant disease of cervix diagnosis in followed women related to occupation.

Cervical cancer diagnosis related to occupation shows in Table 8 higher frequency in house wife 29(87.8%)cases compere with employ women 22(81.4%) cases .The relation was not significant at P value ≤ 0.05 . _____

Table 8. The premalignant and malignant disease of cervix related to occupation.

Cervical cancer Occupation	Positive Number	%	Negative Number	%	Total Number	%
House wife	29	87.8	4	12.2	33	55
Employ	22	81.4	5	18.6	27	

					45
					60
Total	51	85	9	15	100

Chi square=0.47 df=1 P value ≤ 0.05

10. The premalignant and malignant disease of cervix diagnosis in followed women related to residence .

The present study, revealed that the higher rate of women with cervical cancer was from rural areas (89.6%)cases as compared with those from urban areas (80.6%)cases .The result was statistically , not significant P value ≤ 0.05, as shown in Table 9.

Table 9 The premalignant and malignant disease of cervix related to residence.

Cervical cancer Residence	Positive Number	%	Negative Number	%	Total Number %
Rural	26	89.6%	3	10.4%	29 48.3%
Urban	25	80.6%	6	19.4%	31 51.7%
Total	51	85%	9	15%	60 100%

Chi square =0.95 df= 1 P value ≤ 0.05

11. Relation between The premalignant and malignant disease of cervix and marital status.

Figure 3 shows the distribution of The premalignant and malignant disease of cervix according the marital status. Higher frequency cases married women 32(63%) from 51 cases have cervical cancer.

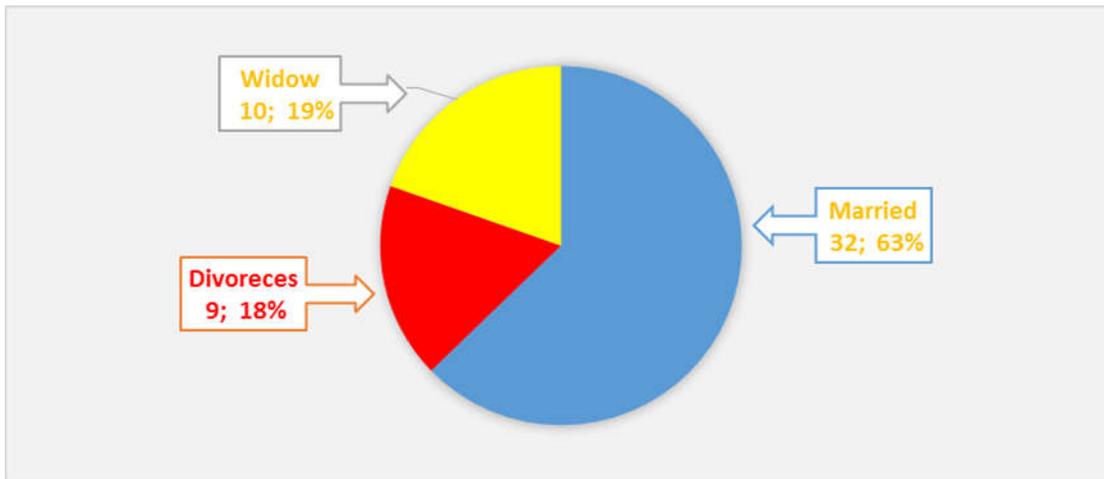


Figure 3 The distribution of The premalignant and malignant disease of cervix according the married status..

Discussion

Pap smear is the appropriate screening test for detection premalignant lesion of cervical cancer in worldwide , but the coverage of the Pap smear is quite low in Iraqi population.

5.1.The result of Pap smear practice among women:

The practice of women about doing of Pap smear vary little due to an adequate knowledge about pap smear, lack of counseling , thought it was painful procedure, coasty to many patient and week medical educational program . Higher frequency of positive result of Pap smear 60 case and less frequency of negative result 33 woman . The

follow up for all positive results except 6 how do total hysterectomy . During follow up 9 of them return to normal cervical epithelium and 45 stay in abnormal smear and refer to colposcopy, but in negative result only one woman do follow up from 33 women according Pap smear schedule (follow up every 3 to 5 years according age of woman) .Another study in Korean women showed that the most frequently cited reason for not having had a Pap smear test was lack of awareness of important of screening and absent of disease symptom ⁽⁷⁾ .

5.2. The result of Pap smear related to the age:

The relation of Pap smear result with age in this study was not significant the higher frequency of positive result in age group 30 to <40 years old (57.1%) . Current study agree with a study in Nepal that showed most age done pap smear between 36-50 years old ⁽⁸⁾ . Other study in Sudanese woman agree with current study frequent positive result of Pap smear in age group (31-40) ⁽⁹⁾ . study in Iran disagree with present study have significant relation with increase age ⁽¹⁰⁾ . Other screen disagree with study done in Tabriz for 441 women showed more positive result of Pap smear present among women with age group between (55-65) years old ⁽¹¹⁾ .

5.3.The relation of result of Pap smear with education:

Among this study the relation of result of Pap smear with education was higher frequency of positive result in high educational level (57.1%) because high socioeconomic stat .this agree with other study in UK showed no relation between the result of Pap smear and educational level .⁽¹²⁾

5.4. Relation between PAP smear result and occupation:

In present study the relation between the result of Pap smear and occupation was positive relation higher frequency of positive result in house wife (84.6%) cases may due to house wife neglect the personal health ,multiparty and married at young age this agree with study in Iran showed the relationship between women occupation and result of doing Pap smears revealed that 65.3% of housewives have Pap smear positive And this rate in women workers was lower than of all ⁽¹³⁾ .

5.5.Relation of Pap smear result according the residence:

The current study showed not significant relation between the residence and result of PAP smear the positive result higher frequency in urban woman (54.3%) and less among rural women this may occur due to urban woman easier reached to attend in hospital or privet clinic and good socioeconomic level compare with rural women how difficult to reach to hospital or privet clinic with poor

socioeconomic level.

This study disagree with other study in Malaysia showed positive relation of result of Pap smear with residence 57.1% is higher frequency of positive result in rural women compare with urban women ⁽¹⁴⁾

6. Relation between positive result of PAP smear and risk factor:

The higher frequency of married at young age (below 18 years old) present highly frequency with positive PAP smear (48%) and less frequency with STD and smoking (2%) . this acceded with other study in Tehran in Iran show sexual activity at young age increase the positive result of Pap smear 2010 ⁽¹⁵⁾ .This disagree with study in Ohio 2006 show the most risk factor is smoking multiple partner ⁽¹⁶⁾ . while other study too disagree with current study on women in Portland, Jamaica. North Am. the higher frequency risk factor is multiple partner 2015 ⁽¹⁷⁾ .

7. Relation of The premalignant and malignant disease of cervix with age :

The relation in current study between

cervical cancer and age is higher frequency of age group have cervical cancer (31 to < 41) years old 14(87.5%) cases. This study agree with other study in Dhahran 2014 show cervical cancer most frequently in age 35 and 64 years old ⁽¹⁸⁾ ,this study is disagree with study in Iraq 2012 show significant relation between age and cervical cancer show highly age present with cervical cancer after 50 years old ⁽¹⁹⁾.

5.8. Relation of The premalignant and malignant disease of cervix with education:

The cervical cancer higher frequency in higher educational level 20(83.3%) compare with less frequency in illiterate 2(66.6%) this result because of the woman come to hospital to check up from high educational level this result agree with result of study in brazil at 2008 show the women with high educational level have cervical cancer because awareness about screening more than illiterate women ⁽²⁰⁾.

5.9. Relation of The premalignant and malignant disease of cervix with

occupation:

The result of research show the higher frequency of cervical cancer in house wife 29(87.8%)cases compare with employed women 22(81.4%) cases the house wife may be neglect medical check up , exposed more to risk factor like married at young age or multiparty therefore we have this result .the current study agree with study in Nigeria at 2013 how show house wife more exposed to cervical cancer than women how have job because house wife will have more risk factor like more parity and STD infection ⁽²¹⁾ and another study in Brazil at 2005 agree too with this result more cases of cervical cancer from house wife ⁽²²⁾ .

5.10. Relation of the premalignant and malignant disease of cervix with residence:

Relation of cervical cancer with the residence is frequently in rural women 26(89.6%)cases compare with urban 25(80.6%)cases this result due to increase rate of married of vary young female , husband with multiple wife's and multi parity in rural area compare

with urban this study is agree with study in China at 2013 by. Hong Y, Zhang C, Li X, show the women live in rural and periphery have high frequency of cervical cancer compare with urban and how live in center of city ⁽²³⁾ and same result in Khartoum Sudan highly percentage of cervical cancer occur in rural woman ⁽⁹⁾ .

5.11.Relation between The premalignant and malignant disease of cervix and married status:

Distribution of cervical cancer according the marital status showed Higher frequency of cases married women (63%) and less frequency is divorce (18%) among cases have cervical cancer this result may due to the married women have regular sexual relation and increase chance of infection and pregnancy and multiparty compare with widow or devoirs women this result agree with study in Turkey that showed the relation between diagnosis of cervical cancer and marital state higher frequency occur in married

woman and less common in devoirs and widow⁽²⁴⁾.

Conclusions 6.1:

From the obtained data the following conclusions can be drawn

1. women how practice of Pap smear is frequently from age(31 to <41) years old 28(29.1%) ,higher educational level 42(47.7%), employed 54(49.5%) and from urban area 57(34.5%)

2. The relation of positive result Pap smear with age higher frequent in age group(31 to <41) 16 (57.1%) women ,24(57.1%) among women of high educational level,33(48.6%) among house wife and 31(54.3%) among urban women.

3.Common risk factor with positive Pap smear is married at young age 29(48%) ,and common risk factor come with cervical cancer is married at young age to 24(47%).

10.The most cases of positive Pap smear >(90%) do fallow up but in negative result the follow up according Pap smear schedule (3%) women.

11.The relation of marital state and cervical cancer show higher frequency among married women32(63%) and less frequent with divorced women 9(18%).

12. The relation of cervical cancer with age is higher frequency in age group between 31 to<41 years old (87.5%),with education higher frequency in high educational level (83.3%), with occupation higher frequency with house wife (87.8%) and with residence is higher significant in rural(89.6%).

6.2:Recommendation:

6.2.1: For women:

Advice to married women after 18 yours old to decrease the chance of cervical cancer by the following:

1. Good personal hygiene.
- 2 . Monitor for how long time using of contraceptive
3. Immediate counselling for any abnormal lesion in valve, abnormal vaginal discharge, abnormal bleeding and dyspareunia .
4. _HPV vaccination in female aged between9-13 years old with follow up.

5. Partners screening for sexual transmitted disease (STD).

6. Mention parity below 5 child.

7. Self-education by watching TV medical program ,reading medical magazine report and follow medical web site.

8. Advice to social desiccation about gynecological problems with her family and friends discussion .

6.2.2:For medical staff (gynecologist, general practioner , nurse):

1. Advice the married women for Pap smear screening.

2. Do cervical cytology for woman even she had not sign of cervical cancer but women sexually active.

3. The woman with HIV-positive status or HIV status unknown in endemic area HIV should be screening and follow up to prevent develop of cervical cancer.

4. Women who are immunosuppressed (e.g. chemotherapy, chronic corticosteroid treatment)need more screening interval.

5. Regular pap smear screening for the married women every 3 to 5 years.

7.Cervical cancer screening should be start at age of 21 years every 3 years between age 21 and 49 years old, Do Pap smear and HPV test every 5 years between 50-65 years old .

8.Pap smear should be done by the doctor and if the doctor show any cell abnormal and may change to cancer should advise the patient to follow up and stay the doctor in contact with patient.

9.Learning the patient positive result of Pap smear accrue due to many causes and does not mean you have cancer.

6.2.3:For ministry of health:

1. Arranged program for Pap smear schedule in hospital for married women aged from 21 to 65 years old.

2. Increase the awareness of the medical staff(doctors , nurses).

3. Awareness the women about benefit of Pap smear through the TV,NET, magazine and other social media

4. Form special unit in each hospitals for doing Pap smear and follow up and provide the instrument and sits for done

5. form special center for management

cervical cancer and monitors the high risk cases.

6. Arranged vaccination scheduled for human papilloma virus(HPV) to women aged from 9 -13 years old .

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