

ORIGINAL RESEARCH ARTICLE

A High School Teachers' Perception on Content and Timing of Sex Education in Ife Central Local Government, Osun, Nigeria

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Abstract: Sex education is out of bounds in a typical African society due to cultural values and belief systems. So sex education is assumed to support promiscuity among adolescents. Premised on this, teachers equally have lopsided views of responsibility. This greatly has hampered the success of inculcation of sex education in high school curriculum and the teaching of the subject. This study aimed to assess the perception of high school teachers towards the contents and timing of sex education in secondary schools in Ile-Ife, South-West Nigeria. 200 high school teachers were randomly selected and served questionnaire that has been pretested and standardized for data collection. Data collected was analyzed using descriptive statistics. Teachers' responses showed positive attitude towards sex education and its inclusion into secondary school curriculum. Higher numbers of the respondents were of the opinion that it is best suited for Secondary schools. However, there were discrepancies as regard the appropriate age at which students should be taught sex education. Also, there were variants on the contents of sex education curriculum. One-third of the teachers indicated that 16 to 18 years were appropriate for sex education. Foremost among the factors identified affecting introduction of sex education into school curriculum were culture, religion and peer influence. The study concluded that appropriate age, timing and class are major factors to be considered before the introduction of sex education into secondary school curriculum.

Keywords: sexuality, education, curriculum, perception, content.

INTRODUCTION

Adolescents' sexual and reproductive health concerns have over the years been a topical issue. However, the societal and cultural ideologies about sexuality and reproductive health have been, and are possibly still being, ignored. Majority of adolescents remained uninformed about sex and sexuality and hence vulnerable to sexual escapades with its negative consequences. Absence of sexual and reproductive health education makes adolescents vulnerable to daunting reproductive and sexual health problems [1].

In Nigeria, discussion on bodily maturation, sexuality, birth control and parenting with adolescents in the family is usually a contentious issue. This has been attributed largely to cultural views, values, beliefs, norms and environment. However, there is no justifiable excuse for denying the teeming, adventure-prone adolescents of comprehensive sexual education. In consonance with this, the United Nations submits that the enjoyment of the right to sexual education plays a crucial preventive role and may be a question of life or death [2]. Similarly, sexual education was identified as a human right, since it is essential for development and human well-being. Additionally, sexual health is one of five core aspects of the global reproductive health strategy approved by the World Health Assembly [3]. WHO noted that sexuality is influenced by the interaction of biological, psychological, social, economic, political, ethical, legal, historical, religious and spiritual factors [4]. Similarly, it was argued that sexuality education encompasses education about all aspects of sexual orientation and pleasure including information about family planning, body image, values, decision making, and communication and dating. It also includes knowledge of sexually transmitted infections and birth control method [5].

While parents are the primary contact for socialization, schools play important role as secondary socializing agent of adolescents in schools. Teachers, therefore, occupy a pivotal role in the lives of students. First, because they develop the academic potential of young people and two, the influence they have in behavioral development and charting the course life of adolescents. It is not surprising then that several researchers have reported the roles of teachers in school-based reproductive health programme as critical to addressing reproductive health challenges of in-school adolescents [6]. As in all areas of education, sexual education must be adapted to different age groups and cultures. In addition, teaching strategies must be differentiated and flexible to meet the differing needs of female and male students. Comprehensive sexual education is extremely important especially for groups at greater risk, women and girls exposed to gender-based violence or persons in difficult financial circumstances.

MATERIAL AND METHODS

This was a hospital based observational study done in Department of obstetrics and Gynecology S.M.S Medical College Jaipur. The present study was a hospital based observational study conducted on 26 pregnant women attending outdoor. Willing participants who are with second trimester pregnancy are included in study

A written informed consent was taken from all women to participate in study. Pre designed questionnaire was given to participants having question regarding their reasons for second trimester abortion like whether it's a spontaneous abortion or induced, is baby having congenital anomaly which is diagnosed in second trimester, reasons behind making

delay in diagnosis and termination and whether she conceived in lactation amenorrhea making her not aware of pregnancy.

RESULTS

The ages of the respondents ranged from 20 to 60 with mean of 4.20 ± 1.93 . Teachers in age group 31-35 had the highest percentage (18.7%) while respondents of between 20 and 25 years had the lowest percentage (6.6%). 84 (42.4%) of the respondents are male while 112 (56.6%) are female. The teachers who were holder of Bachelor's degree accounted for 71(35.9%) while 20(10.1%) had obtained Master of Science degree as their highest educational qualification. The result of the findings showed that 91(46.0%) of the respondents have spent 1-10 years in active service while 17(8.6%) have spent 31-35 years in service. Government school teachers were 123(62.1%) while individual's owned school had 75(37.9%) teachers interviewed. Majority of the teachers (99.4%) were positive about inclusion of sex education into the school curriculum (Table 1).

Table-1: Association of various factors in relation to mortality

Outcome	Mild	Moderate	Severe	Normal	Total
Died	4 10.5%	14 31.8%	8 57.1%	18 10.2%	44 16.2%
Survived	34 89.5%	30 68.2%	6 42.9%	158 89.8%	228 83.8%
Total	38 (100%)	44 (100%)	14 (100%)	176 (100%)	272 (100%)

Blood glucose levels in the normal untreated rats did not show any significant variation throughout the experimental period. Administration of STZ (60mg/kg) led to an elevated blood glucose level, almost 5-fold increase than the normal untreated group. Blood glucose levels measured in normal and other experimental group rats at the end of 7, 14, 21, 28, 35, 42 days of 1st and 2nd BMSC infusion is given in Figure-1.

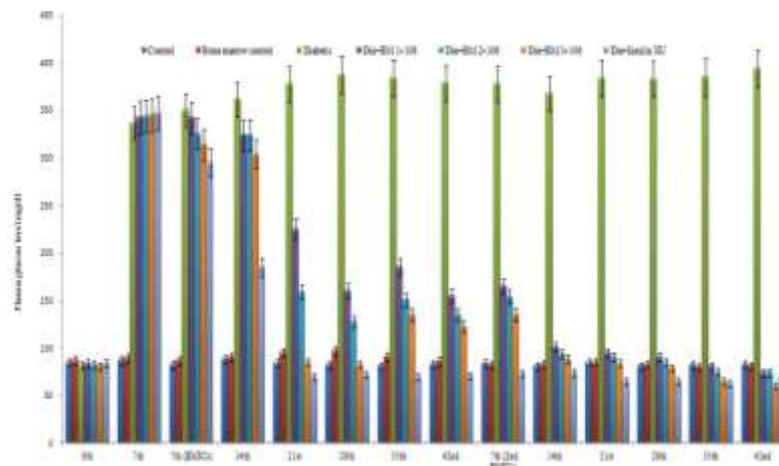


Fig-1: Effect of Bone marrow stem cells on plasma glucose levels in normal and STZ-induced diabetic male Wistar rats

DISCUSSION

Majority of respondents have favourable attitude to the inclusion of sex education into school curriculum. This was in coherence with various works including works done in various continents [6, 7]. More female participants were recorded in this study. It has been found that female teachers usually have positive attitude to sex education in school than their female counterparts [8]. This could be the reason for general acceptance of the concepts. Accordingly, several studies in Nigeria had validated the introduction of sex education in schools. In a cross-sectional study carried out in Kwara State, Nigeria, it was gathered that 78% of the respondents suggested that sex education should be made compulsory in schools [9]. However, the teaching of strict abstinence from sex encourages self-worth, character building, and skills needed to refuse or accept sexual disposition was well supported by majority of teachers [10]. It does not acknowledge that many teenagers could become inquisitive about the use of contraceptives, condom especially. It also failed to discuss abortion and sexually transmitted disease [11].

CONCLUSION

This study reflects that most of the respondents agreed to the teaching and inclusion of sex education into school curriculum. The positive attitude and perceptions towards sex educations among teachers of high school is highly

commendable. This is an indication of the high educational attainments of the teachers. However, there reservations about salient issues about sexuality showed lack of adequate training in human sexuality. Again, culture, conservative religious beliefs and fear in the way of integrating sex education into school curriculum. All hands must be on deck irrespective of the position or stand of teachers to ensure that adolescents receive healthy and factual sex education for all-round development at appropriate time, age and class.

Acknowledgement

We wish to acknowledge the help given by Mr Arvind Kawishwar Bio-Statistician, Regional Medical Research Centre for Tribals , Indian Council of Medical Research , Jabalpur 482003 (M.P.) India in statistical analysis of data.

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REVIEW ARTICLE

A High School Teachers' Perception on Content and Timing of Sex Education in Ife Central Local Government, Osun, Nigeria- A Review

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Abstract: There are individual and race-based differences in sagittal spinopelvic alignments. Jackson et al. described the angle formed between a line drawn along the sacrum (S1) end plate and a line from the posterior margin of the S1 end plate to the central axis of the hip joints. They defined this pelvic morphologic angle as PRS1. They reported that PRS1 showed a negative correlation with lumbar lordosis in adults in the prime of life. In this study, we investigate PRS1 and lumbar lordosis in the elderly population. 196 female patients (average age 85.0 years) were included as the subjects of this study. We analyzed the measurement of PRS1 with multi-planar reconstruction image of the CT. Lumbar lordosis was measured with a lumbar vertebrae radiograph image. PRS1 and lumbar lordosis displayed a negative correlation. ($r=-0.345$, $p<0.001$) We concluded that PRS1 is an important factor in considering the sagittal spinopelvic alignments of an elderly person.

Keywords: pelvic morphologic angle (PRS1), lumbar lordosis, elderly patients

Plant materials

The *Prosopis juliflora* (leave) were collected from Elsunut Forest Khartoum State Sudan [1]. The plant was identified and authenticated by the taxonomists of Medicinal and Aromatic Plants and Traditional Medicine Research Institute (MAPMRI). The *P. juliflora* (leave) were air-dried, under the shadow with good ventilation and then ground finely in a mill until their uses for extracts preparation.

Preparation of crude extracts

Extraction was carried out according to the method described by Harbone [2]. Briefly 50 g were macerated in 250 ml of ethanol for 3 hours at room temperature with occasional shaking for 24 hours at room temperature, the supernatant was decanted and clarity field by filtration through a filter paper, after filtration, the solvent was then removed by rotary evaporator at 55 °C. Each residue was weighed and the yield percentage was determined (% of dry weigh) and stored at -20 °C for further analysis in tightly sealed glass vial [3].

Antioxidant activity of plant extracts

DPPH radical scavenging assay

The DPPH radical scavenging was determined according to the method of Shimada *et al.* [4] with some modification. In 96-wells plate, the test samples were allowed to react with 2,2-Di (4-tert-octylphenyl)-1-picryl-hydrazyl stable free radical (DPPH) for half an hour at 37°C. The concentration of DPPH was kept as 300 µM. The test samples were dissolved in DMSO while DPPH was prepared in ethanol. After incubation, decrease in absorbance was measured at 517 nm using multiplate reader spectrophotometer. Percentage radical scavenging activity by samples was determined in comparison with a DMSO treated control group and Propyl Gallate (PG). All tests and analysis were run in triplicate.

Preparation of the Extracts

In this study the preliminary phytochemical screening was conducted by Haborne [5]. 10 mg of the powdered leaves were refluxed with 100 ml of ethanol 80% for 4 hours [6]. The cool solution was filtered and enough ethanol 80% was passed through the volume of the filtrate 100 ml. This prepared extract (PE) was used for the various tests [7-8].

Phytochemical screening of *Prosopis juliflora* (leaves)

Test for Unsaturated Sterols and Triterpenes

10 ml of the prepared extract (PE) was evaporated to dryness on a water bath and the cooled residue was stirred several times with petroleum ether to remove most of the coloring materials. The residue was then extracted with 20 ml of chloroform. The chloroform solution was dehydrated over sodium sulphate anhydrous. 5 ml of chloroform solution was mixed with 0.5 ml acetic anhydride followed by two drops of conc. Sulphuric acid. The gradual appearance of green, blue pink to purple color was taken an evidence of the presence of sterol (green to blue) and or triterpenes (pink to purple) in the sample [9].

Test for Alkaloids

7.5 ml of (PE) was evaporated to dryness on a water bath. 5 ml of HCl (2N) was added and stirred while heating on the water bath for 10 minutes, cooled filtered and divided into two test tubes. To one test tube few drops of Mayer's reagent were added, while to the other tube few drops of Valser's reagent were added. A slight turbidity or heavy precipitate in either of the two test tubes was tanked as presumptive evidence for the presence of alkaloids [10].

Test for Flavonoids

17.5 ml of the (PE) was evaporated to dryness on a water bath, cooled and the residue was defatted with petroleum ether and the defatted residue was dissolved in 30 ml of ethanol (80%) and filtered. The filtrate was used for the following tests: (A) To 3 ml of the filtrate in a test tube 1 ml of 1% aluminum chloride solution in methanol was added. Formation of yellow color indicated the presence of Flavonoids, (Flavones and / or chalcone). (B) To 3 ml of the filtrate in a test tube 1 ml of 1% potassium hydroxide solution was added. A dark yellow color indicated the presence of the Flavonoids compounds (flavones or flavanones) chalcone and/or flavonol. (C) To 2 ml of the filtrate 0.5 ml of magnesium turnings were added. Producing of defiant color to pink or red was taken as presumptive evidence that flavanones were present in the plant sample [11].

Test for Tannins

7 ml of the (PE) was evaporated to the dryness on water bath. The residue was extracted several times with n-hexane and filtered. The insoluble residue was stirred with 10 ml of saline solution. The mixture was cooled, filtered and the volume of the filtrate was adjusted to 10 ml with more saline solution. 5 ml of this solution was treated with few drops of gelatin salt reagent. Formation of immediately precipitate was taken as an evidence for the presence of tannin in plant sample [4]. To another portion of this solution, few drops of ferric chloride test reagent were added. The formation of blue, black or green was taken as an evidence for the presence of tannins.

Test for Saponins

1 g of the original dried powdered plant material was placed in a clean test tube. 10 ml of distilled water was added and the tube was stoppered and vigorously shaken for about 30 seconds [8]. The tube was then allowed to stand and observed for the formation of (honeycomb). The appearance of honeycomb, which persisted for least an hour, was taken as an evidence for the presence of Saponins.

Test for Anthraquinone Glycosides

10 g of the powdered plant sample were boiled with 10 ml of 0.5N KOH containing 1 ml of 3% hydrogen peroxide solution. The mixture was extracted by shaking with 10 ml of benzene. 5 ml of the benzene solution was shaken with 3 ml of 10% ammonium hydroxide solution and the two layers were allowed to separate. The presence of Anthraquinones was indicated if the alkaline was found to have assumed pink or red color [3].

Test for Coumarins

3 g of the original powdered plant sample was boiled with 20 ml of distilled water in a test tube and filter paper was attached to the test tube to be saturated with the vapor after a spot of 0.5N KOH put on it. Then the filter paper was inspected under UV light, the presence of coumarins was indicated if the spot has found to be absorbed the UV light [1].

Statistical analysis

All data were presented as means \pm standard deviation (SD). Statistical analysis for all the assays results were done using Microsoft Excel program (2010) [9].

CONCLUSION

In such patients detailed preanaesthetic evaluation is compulsory, proper optimization of patient before surgery is mandatory. Preoperative anticipation of difficult airway and adequate preparation for management of it has crucial role in recovery of patient.

Acknowledgement

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CASE REPORT

Unruptured interstitial ectopic pregnancy: A rare case report Oni Oluwabunmi B.¹, Ayandiran Olufemi¹, Olajide Joshua S.²

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Abstract: Acromegaly is rare disorder caused by either excessive secretion of growth hormone or pituitary adenoma secreting excess growth hormone. Enlargement of face, tongue and mandible with involvement of soft tissues and

connective tissues makes airway difficult. Associated medical disorders and difficult airway leads to anaesthesia challenging in a patient of Acromegaly. We report a case of Acromegaly with hypertension, diabetes mellitus and difficult airway.

Keywords: Acromegaly, Difficult Airway, Emergency exploratory Laparotomy

INTRODUCTION

Acromegaly was first described by Marie in 1886 [1]. In 1983 Melmed reported raised levels of growth hormone and IGF-1 are responsible for this syndrome [2]. Cushing in 1909 found that pituitary dysfunction was the aetiology of the disease [3]. It is rare disorder with incidence of 3 to 4 cases per million and prevalence is around 50 to 70 cases per million [4]. It occurs commonly both in males and females and at the age of 40 to 50 years patients are usually diagnosed [5]. Over secretion of growth hormone due to excessive secretion of growth hormone releasing hormone or pituitary tumours secreting excess growth hormone in Acromegaly patients. Coexisting cardiovascular diseases and respiratory problems combined with airway involvement create challenge for the anaesthetist [6].

CASE REPORT

40 year old male patient came with pain in abdomen, constipation since 3 to 4 days. He was diagnosed as intestinal obstruction and posted for emergency exploratory laparotomy. On general examination his pulse rate was 120 / min, regular, blood pressure was 170/100 mm of Hg. On airway examination he had enlarged face, enlarged tongue and prognathism with malocclusion contributing to Acromegaly Facies. His upper half of body was disproportionate with lower half of body. He had spade like hands and legs. His voice was husky. On blood investigation his complete blood count was normal. Blood sugar was 289 mg/dl, liver function test and kidney function test was normal. On chest x-ray mild cardiomegaly was present. ECG was done which showed no significant abnormality. We planned for general anaesthesia with endotracheal intubation.

Preoperative informed consent and additional tracheostomy consent was taken. Nil by mouth status was confirmed. In operation theatre monitoring was done with electrocardiography, noninvasive blood pressure, pulseoximeter and ETCO₂ monitor. Two peripheral lines one in right upper limb 18 G and second in left upper limb 20 G was taken. In premedication injection Ranitidine 80 mg, injection ondansetron 8 mg was given. We kept ready difficult airway cart with LMA, Intubating LMA, Flexitip Laryngoscope, Bougie, Cricothyrotomy set, Fiberoptic bronchoscope and tracheostomy set. Preoxygenation given for 5 mins. Inj Glycopyrolate 0.5 mg, inj midazolam 2 mg, inj fentanyl 100 ug was given. Induction was done with inj propofol 100 + 20+ 20 + 20 mg and sevoflurane 6% with inj succinyl choline 120 mg. On laryngoscopy we found Cormack Lehane grade III. So with the help of Bougie and cricoid pressure, we successfully intubated the patient with 8.5 no endotracheal cuffed tube. Maintenance was done with O₂, N₂O, Isoflurane, Dexmedetomidine and vecuronium. Injection Insulin infusion at the rate of 1 unit per hour was started for strict control of blood sugar and hrly sugar monitoring was done. Intraoperative pt was stable. There was minimal blood loss and urine output was adequate. Pt was reversed with inj neostigmine 3.5 mg, inj glycopyrolate 0.5 mg and well extubated. Postoperatively pt was shifted to surgical intensive care unit for further monitoring. Recovery was uneventful. Patient was discharged at home on 8th postoperative day.

DISCUSSION

Acromegaly is one of the rare and endocrine disorders caused by either excessive secretion of growth hormone or pituitary adenoma secreting excess growth hormone. Acromegaly was first described by Marie in 1886 [1]. Cushing in 1909 found that pituitary dysfunction was the aetiology of the disease [2]. Incidence of disease is 3 to 4 cases per million and prevalence is approximately 50 to 70 cases per million [4]. It is found commonly both in males and females and patients are mostly diagnosed at the age of 40 to 50 years [5].

Acromegaly makes anaesthesia challenging due to difficult airway and its close association to multisystem involvement [5, 7]. It is associated with hypertension, diabetes mellitus [2, 4, 8], aortic valve incompetence, mitral valve incompetence, congestive cardiac failure, obstructive sleep apnoea, osteoarthritis, carpal tunnel syndrome and myopathy [9]. Cardiac complications are very well known in these patients [10, 11]. Acromegaly causes glucose intolerance due to resistance to the effects of insulin, as hyperglycemia is identified to exacerbate various types of cerebral ischemia [11]. P.A. Seidman et al also observed decreased urine output despite adequate fluid volumes during surgery. It may be due to lower cardiac output, fluid volume dysautoregulation or renal dysfunction in Acromegaly patients [5]

Soft tissue involvement results in enlargement of face, enlargement of tongue, spade like hands and legs. Bony involvement causes large mandibular length, prognathism with malocclusion which poses difficulty in mask ventilation. Patient also has both extremities enlarged. In connective tissue involvement vocal cords can be enlarged resulting in husky voice and recurrent laryngeal nerve palsy can be presented with hoarseness of voice [5, 7].

In our patient all features of acromegaly were present. Mandibular length was 10 cm. Tongue was large. Mouth opening was 3 fingers as shown in Fig 1, Mallampatti grading was grade IV Thyromental distance was 7.5 cm, Hyomental distance was 8 cm and sternomental distance was 8.5 cm. His RHTMD (Ratio of height to thyromental distance) was 25 cm. Schimtt et al 2002 and Krobbuaban et al 2005 have reported that ratio of patient height in cm to hyromental distance in cm has better predictive value for predicting difficult laryngoscopy than thyromental distance alone. If ratio is lesser than 23.5 cm an easy laryngoscopy may be anticipated as in our case ratio was 25 cm [10]. Upper Lip Bite test was grade II.



Fig-1: Features of acromegaly

But we could manage to ventilate the patient by jaw thrust manoeuvre with difficulty and we required Gudel's 5 no oropharyngeal airway. With anticipated difficult airway we were ready with difficult airway cart. On laryngoscopy Cormack Lehan grading was grade III, so with the help of ventilating boogie and cricoid pressure we successfully intubated the patient. Apart from difficult airway patient had uncontrolled blood pressure and blood sugar. So we used injection Dexmedetomidine infusion at the rate of 1ug / kg bolus for 10 min followed by 0.5 ug / kg / hr in intraoperative period. Haemodynamic was stable. For control of blood sugar injection insulin infusion at the rate of 1 unit per hour was given and hrly sugar charting was done. Alpha 2 agonist inj Dexmedetomidine has crucial role in such type of cases. It decreases requirement of muscle relaxant, inhalational anaesthetics so helpful for early recovery and smooth extubation in difficult airway cases and additionally it is potent analgesic.

We successfully extubated the patient and shifted to surgical intensive care unit for further monitoring. Recovery was uneventful and patient was discharged on 8th postoperative day.

CONCLUSION

In such patients detailed preanaesthetic evaluation is compulsory, proper optimization of patient before surgery is mandatory. Preoperative anticipation of difficult airway and adequate preparation for management of it has crucial role in recovery of patient.

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SHORT COMMUNICATION

Unruptured interstitial ectopic pregnancy: A rare case report

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Abstract: Acromegaly is rare disorder caused by either excessive secretion of growth hormone or pituitary adenoma secreting excess growth hormone. Enlargement of face, tongue and mandible with involvement of soft tissues and connective tissues makes airway difficult. Associated medical disorders and difficult airway leads to anaesthesia challenging in a patient of Acromegaly. We report a case of Acromegaly with hypertension, diabetes mellitus and difficult airway.

Keywords: Acromegaly, Difficult Airway, Emergency exploratory Laparotomy.

Preoperative informed consent and additional tracheostomy consent was taken [1]. Nil by mouth status was confirmed. In operation theatre monitoring was done with electrocardiography, noninvasive blood pressure, pulseoximeter and ETCO₂ monitor. Two peripheral lines one in right upper limb 18 G and second in left upper limb 20 G was taken. In premedication injection Ranitidine 80 mg, injection ondansetron 8 mg was given. We kept ready difficult airway cart with LMA, Intubating LMA, Flexitip Laryngoscope, Bougie, Cricothyrotomy set, Fiberoptic bronchoscope and tracheostomy set [2]. Preoxygenation given for 5 mins. Inj Glycopyrolate 0.5 mg, inj midazolam 2 mg, inj fentanyl 100 ug was given. Induction was done with inj propofol 100 + 20 + 20 + 20 mg and sevoflurane 6% with inj succinyl choline 120 mg. On laryngoscopy we found Cormack Lehane grade III. So with the help of Bougie and cricoid pressure [3], we successfully intubated the patient with 8.5 no endotracheal cuffed tube. Maintenance was done with O₂, N₂O, Isoflurane, Dexmedetomidine and vecuronium. Injection Insulin infusion at the rate of 1 unit per hour was started for strict control of blood sugar and hrly sugar monitoring was done. Intraoperative pt was stable. There was minimal blood loss and urine output was adequate. Pt was reversed with inj neostigmine 3.5 mg, inj glycopyrolate 0.5 mg and well extubated. Postoperatively pt was shifted to surgical intensive care unit for further monitoring. Recovery was uneventful. Patient was discharged at home on 8th postoperative day [4-7].

Majority of respondents have favourable attitude to the inclusion of sex education into school curriculum. This was in coherence with various works including works done in various continents [6, 7]. More female participants were recorded in this study. It has been found that female teachers usually have positive attitude to sex education in school than their female counterparts [8]. This could be the reason for general acceptance of the concepts. Accordingly, several studies in Nigeria had validated the introduction of sex education in schools. In a cross-sectional study carried out in Kwara State, Nigeria, it was gathered that 78% of the respondents suggested that sex education should be made compulsory in schools [9]. However, the teaching of strict abstinence from sex encourages self-worth, character building, and skills needed to refuse or accept sexual disposition was well supported by majority of teachers [10]. It does not acknowledge that many teenagers could become inquisitive about the use of contraceptives, condom especially. It also failed to discuss abortion and sexually transmitted disease [11].

Acknowledgement

We wish to acknowledge the help given by Mr Arvind Kawishwar Bio-Statistician, Regional Medical Research Centre for Tribals, Indian Council of Medical Research, Jabalpur-482003 (M.P.) India in statistical analysis of data.

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