Questionnaire surveys targeting Japanese pediatric endocrinologists regarding reproduction in pediatric and adolescent cancer patients

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Background

- With improvements in the treatment prognosis of cancer, the number of childhood cancer survivors (CCSs) has increased.
- Even though their high incidence of gonadal dysfunction or subfertility as late complications (late effects) has been recognized, a small number of surveys have been conducted in Japan.

Aim

- To assess physicians' opinions and reveal the current status of clinical practice in order to investigate issues associated with reproduction in Japanese pediatric or adolescent cancer.

Results: first questionnaire survey

Status of questionnaire responses

•Response rate: 84.8% (151 valid responses) Male: 82.7%, Female: 92.3%
•Majority of respondents were practicing in large-scale institutions.
•Existence in the same institution: Pediatric oncologists 62.9%, Reproductive specialists 53.6%
•Experience with clinical practice in CCS: 94.7%, Long-term follow-up: 74.8%

Current status of clinical practice

•More than half of endocrinologists examined patients after cancer treatment and, in most cases, who were experiencing physical issues.
•Providing explanations regarding treatment-related gonadal dysfunction before the treatment: "Yes" 58.9%, "No" 2.0%, "Not sure" 25.8%, "By the oncologists" 88.8%
•Providing explanations on treatment-related subfertility: "Yes" 54.3%, "No" 4.6%, "Not sure" 22.5%, "By the oncologists" 90.2%
•Experience with childbirth in CCS: 16.6% (n=25)

Opinions about maternal/ fetal problems in CCS

•Increase of miscarriages, premature births, delivery problems: "strongly agree" or "agree" 66.9%
•Increase of fetal malformation: "strongly agree" or "agree" 27.8%

Actual experience with difficult situations due to subfertility or maternal health problems: 25.2% (n=38)

•Inadequate explanation before the treatment, shock of being informed by endocrinologists and not by oncologists, difficulty in the absolute evaluation of infertility, issues related to fertility itself, difficulty in selecting treatment for patients with recurrent cancer who desire to have children, disagreement between the opinion of patients and guardians, etc.

Issues with fertility preservation before the cancer treatment

•Experience with fertility preservation: 15.2% (n=23)
•Existence of issues with fertility preservation:
  - "Yes" 22.5%, "No" 29.8%, "Cannot decide" 45.7%

Necessities to maintain gonadal function and preserve fertility (n=71)

4. Experience with fertility preservation (25 answers)
   a) Fertility preservation in males (21 answers)
      - Sperm cryopreservation 16
      - Testicular tissue cryopreservation 2
      - Gonadal shielding before radiotherapy 10
   b) Fertility preservation in females (17 answers)
      - Ovarian cryopreservation 3
      - Ovarian tissue cryopreservation 4
      - Gonadal shielding before radiotherapy 9
      - Ovarian transplantation before radiotherapy 4
      - Gonad suppression with LHRH analog 7

5. Person who suggested fertility preservation
   Medical care provider (21), Guardian (1), Patient (1), Unknown (1)

6. Details of childbirth and issues regarding fertility preservation (27 answers)
   • Various difficulties and problems with fertility preservation
   • Unexpectedly conception in 7 women under estrogen replacement therapy

Conclusion

- Gonadal function and fertility are important for childhood cancer survivors.
- We have to develop a unified guideline for management of their fertility.
- A nationwide survey on maternal health and childbirth of CCS is needed.