

# Status of online sperm donation and sperm bank in Japan

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## Abstract

Facilities worldwide offering donor sperm insemination face sperm donor shortages. There are also known dangers of online information about sperm donation and using donated sperm to conceive without the involvement of medical professionals. Therefore, the authors investigated 140 Web sites retrieved by common Japanese search engines using sperm donation-related keywords. The authors assessed them according to criteria, but most were deemed unsafe (96.4%). Ultimately, 2 personal and 3 company Web sites provided adequate information. However, the personal Web sites lacked representative individual information and the company Web sites had issues including high costs, overseas location of facilities performing insemination, and possible non-Japanese origin of donated sperm.

## KEYWORDS

donor insemination, Japan, social networking, sperm banks, sperm donation

## 1 | INTRODUCTION

In Japan, the first female infant conceived by donor sperm insemination (DI) was born in 1949 under the supervision of Prof. Ando at Keio University. Since then, DI has long been considered as the only method of choice for conceiving children among couples with absolute sterility due to severe male factors (eg, patients with Sertoli cell-only syndrome or patients without testes).<sup>1</sup>

However, fewer men than previously are willing to participate as sperm donors once they become aware of the growing global recognition of children's rights to know their biological parents.<sup>2</sup> In many parts of the world, there have been significant legislative initiatives requiring that the identities of sperm donors be made available to children after they reach a certain age (typically age 18 years). As expected, in some countries that have prohibited sperm donor anonymity, the number of willing sperm donors has decreased, which has led to shortages.<sup>3</sup>

Japan has also been experiencing a shortage of sperm donors and has seen a rise in online sperm donations without the involvement

of health care professionals. Indeed, mass media have been reporting incidents of sperm donations outside the medical institutes as a result of such online offers. Moreover, various problems related to underground sperm donations have been reported.<sup>4</sup>

However, no study has conducted detailed investigation into the state of online sperm donation and sperm banks in Japan. Therefore, in the present study, we investigated the state of online sperm donation in Japan from online searches conducted during 5-10 October 2020. The search engines used were Google, Yahoo, and Goo. We selected the three keywords "sperm donor," "sperm volunteer," and "sperm bank" in Japanese according to preliminary research showing that these keywords retrieve the largest number of hits in the research field.

We investigated the availability of the following categories of information in the Web sites and blogs that were retrieved from our searches: the name, telephone number, and postal and e-mail addresses of the representative individual information about the Web site; interview opportunities for the sperm donor and recipient; consent form; contracts; infectious disease test results of the donor;

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semen analysis results; information on donor history of hereditary diseases and that of his first- and second-degree relatives; sperm donation fee; methods of sperm donation request; and the actual donation (provision of the semen or performing sexual intercourse). In addition, in the case of sperm banks, we investigated whether the number of sperm donors was available and whether “the right to know one's genetic origins” is respected.

## 2 | RESULTS

The Google, Yahoo, and Goo searches returned 140 different Web sites and blogs belonging to both groups and individuals. Of these, 129 (92.1%) were blogs and forums that were missing any or all of the following information: a homepage, an e-mail address, Web site information, interview opportunities for sperm donors and recipients, interviews and meetings, mentions of contracts and consent forms, and information related to infectious disease testing and/or semen analysis results.

Individual investigation via e-mail, mobile phone, and social networking sites revealed that 20 of the 129 blogs and forums no longer provide semen. Investigation into the remaining 109 Web sites revealed that, immediately after sperm collection, the semen will be handed to the recipient in a hotel lobby or at a location convenient for the recipient. Thirty Web sites (23.3%) clearly mentioned that sexual intercourse will be performed on the recipient's date of ovulation if preferred, and 20 Web sites (15.5%) were unclear on this point (Figure 1).

Further detailed individual investigation into the remaining 11 Web sites (7.8%) revealed that 6 did not contain precise donor information on history of hereditary diseases nor on that of his first- and second-degree relatives. After excluding these Web sites, only 5 (4.6%) were considered to provide detailed sperm donor information (Table 1).

A and B were personal Web sites and C, D, and E were company Web sites. The company Web sites charged fees for sperm donation and required recipients to travel abroad to undergo intrauterine insemination, in vitro fertilization, or intracytoplasmic sperm injection

by donor sperm. However, the name of the representative individual, the telephone number, and address given in B were false.

## 3 | DISCUSSION

In this study, we investigated the state of online sperm donation and sperm banks in Japan. It became clear that the sperm donation-related Web sites retrieved by our Internet search did not perform adequate examination to ensure the safety of the recipient. In some cases, it was unclear whether tests for infectious diseases were carried out, and others provided only test results for sexually transmitted diseases that are performed cheaply or for free by the municipality. Sperm analysis results were either unknown or untested. Information on donor sperm was mostly lacking, and the few cases that did provide information showed results of only low-sensitivity semen examination kits. The biggest problem that our investigation revealed was that there was no guarantee that the information given on the Web sites was true. Indeed, mass media have reported cases in which the donor's educational background given on the Web site was completely different from the donor's actual background.<sup>4</sup>

Sperm donation was free of charge on blogs and forums run by groups and individuals; however, recipients were expected to cover costs for items such as travel, hotel stay, and containers for semen collection. It was not possible to confirm these claims made on the Web sites because such matters are communicated personally via Twitter and e-mails linked to the blogs and forums.

Of the 140 Web sites run by groups and individuals that were retrieved through our online search, 5 met our criteria of required information. However, individual donors from sites A and B were deemed inappropriate as sperm donors because their personal information was ambiguous. C, D, and E were company sites of businesses running the intermediary business of donor insemination. They imposed strict criteria for donors, but recipients underwent intrauterine insemination or in vitro fertilization at fertility clinics abroad, namely, the United States and Thailand. This option is,

**FIGURE 1** The Google, Yahoo, and Goo searches returned 140 different Web sites and blogs belonging to both groups and individuals. After careful investigation of them, only 5 (4.6%) were considered to provide detailed sperm donor information

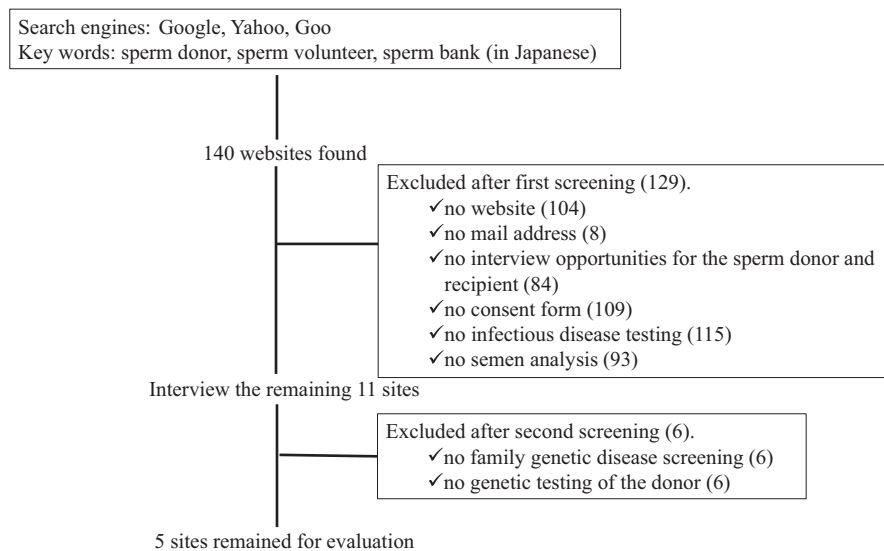


TABLE 1 Online sperm donation and sperm banks in Japan

	A	B	C	D	E
Name of representative	x	x	○	○	○
Phone number	x	x	○	○	○
Address	x	x	○	○	○
Mail address	○	○	○	○	○
Interview form	○	○	○	○	○
Consent form	○	○	○	○	○
Sperm handling fee	Free	Free	¥30,000	¥3,000,000	¥400,000
			Mentions registration fee only		
How to use	Self-insemination	Self-insemination	IUI, IVF/ICSI	IUI, IVF/ICSI	IUI, IVF/ICSI
Where?	In Japan	In Japan	At a clinic in the United States	At a clinic in the United States	At a clinic in Thailand

Abbreviations: x, no information; IUI, intrauterine insemination; IVF/ICSI, in vitro fertilization/intracytoplasmic sperm injection.

therefore, financially burdensome for the recipient; moreover, the sperm provided might be of non-Japanese Asian origin.

Our study revealed the risk of online sperm donation for recipients, and that this method is becoming increasingly underground. This might be due to the lack of domestic specialized sperm banks that provide sperm for donor insemination. We made additional search of sperm banking service described in English through the Internet which could be contacted from Japan. Six sperm bank companies were selected. All had complete semen analyses, infection and genetic screening of the donors and their family members. Two of them accepted anonymous donors and the rest accept both anonymous and non-anonymous donors. Details were listed in Table S2.

We appeal for rapid establishment of such facilities and environments that facilitate DI as a way for couples with absolute male-factor infertility to conceive.

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## CONFLICT OF INTEREST

Kumiko Nakata, Hiroshi Okada, and Toshiyuki Iwahata declare that they have no conflict of interest.

## HUMAN AND ANIMAL RIGHTS

This article does not contain any study with human or animal participants that had been performed by any of the authors.

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## SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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