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Transfusion Consent in Oman: Physicians' Perception at a Tertiary Care University Hospital

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ABSTRACT

Objectives: Transfusion is a common intervention that mandates the discussion of benefits, risks, and alternatives to planned transfusions. In Oman, transfusion consent was first introduced at the Sultan Qaboos University Hospital in March 2014. We sought to evaluate our physicians' opinions, attitudes, and perception of the transfusion consent process. ***Methods***: Attending physicians of different specialties were invited to complete an anonymous survey on transfusion consent. ***Results:*** A total of 114 physicians responded to the survey. Transfusion benefits and risks were explained regularly by 91% and 87% of the surveyed physicians, respectively. On the other hand, alternatives were declared by only 38%. Discomfort with the consent process was admitted by 10% of the physicians. There was no statistically significant association between discomfort in obtaining the consent and the physician seniority ($p = 0.801$), nor their specialties ($p = 0.623$). The importance of the consent process was acknowledged by 80% of surveyed physicians, who supported its implementation in other hospitals. ***Conclusion:*** This survey reflects positive attitudes of the surveyed physicians on the importance of transfusion consent. However, actions are required to achieve physicians' full ease with the process and to ensure that transfusion alternatives are discussed. We advocate implementation of transfusion consent in other hospitals in Oman.

Blood transfusion is a frequent medical intervention in hospitals. Although blood transfusion is remarkably safe compared to other procedures, it does carry the risk of adverse reactions and transfusion-transmitted infections. Therefore, transfusion should only be used to treat conditions leading to significant morbidity or mortality that cannot be treated or prevented by other means.[1] Patient consent to blood transfusion is a topic that has stimulated much debate for a number of years.[2,3] That said, with the recognition of transfusion risks, effective communication of the risk-benefit ratio has become increasingly important.

A patient receiving a blood transfusion should be provided with information regarding the purpose, anticipated benefits, expected outcome without transfusion, and any alternative measures. Finally, the patient should be made aware of the frequent and significant risks of a transfusion.[4] That said, such patient-centered care requires that the clinicians be aware of and responsive to individual patients preferences, needs, and values. It also requires that clinicians appreciate the patients' perceptions of transfusion practice.[5,6]

Transfusion consent in Oman was first introduced at the Sultan Qaboos University Hospital in March 2014. A policy was written and a consent form was created. The consent policy mandates the consent to be given by a qualified physician who must explain transfusion benefits, risks, and alternatives before obtaining the consent. Consent is mandatory prior to blood transfusion except in emergency situations where the patients or substitute decision-makers are unable or unavailable to provide consent. In such cases, the patients or guardians should be subsequently informed about the requirements for the blood transfusion and have the reasons for the transfusion explained to them. Prior to implementation of the consent policy, hospital-wide educational sessions were initiated to raise the awareness of the healthcare

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providers of the following: the new policy and procedure for the transfusion consent, patient consent rights, the elements of the consent, how the consent may be given, validity of the consent, and documentation. A pocket-sized guide was made available and distributed to all nurses and physicians to aid implementation. We examined physicians' attitudes and impressions towards the provision of transfusion-related information and their opinion of the importance of the consent process. This is the first study that was conducted locally and, to the best of our knowledge, is the first to assess physicians' attitudes toward the transfusion consent policies in our region.

METHODS

An anonymous paper survey was distributed among physicians of different specialties in the hospital, including hemato-oncology, internal medicine, pediatrics, obstetrics, surgery, and anesthesia. The survey was distributed among physicians in their first year of practice (interns), residents, and senior physicians (senior house offices and registrars). The survey took place from January to March 2015. The physicians were given assurance before participation in the survey that their answers will be confidential and the results will be anonymized. The survey assessed the physicians' impression of the importance of the transfusion consent process, frequency of examining the risks, benefits and alternatives to blood transfusion, and their opinion of the need to apply the transfusion consent process in other hospitals in Oman. The questions from the survey are presented in Table 1.

Responses were measured on a Likert-based scale. Participation in the survey was voluntary and no incentives were given to the respondents. Ethical approval for conducting the study was obtained by the local ethics committee at the College of Medicine and Health Sciences, Sultan Qaboos University.

Data collected were entered into Microsoft Excel (Microsoft, Washington, US) and analyzed by the SPSS Statistics (SPSS Statistics Inc, Chicago, US). Descriptive statistics were used to summarize the results and associations were tested using the chi-square test. One-way analysis of variance (ANOVA) was used to determine whether there were any significant differences in the mean grades of importance of the transfusion consent given by the different physician groups. A p-value of < 0.050 was considered statistically significant.

RESULTS

A total of 114 physicians from different specialties responded to the survey [Table 2]. Previous involvement in the transfusion consent process was declared by 77% of the surveyed physicians. Interns and residents accounted for 37.7% and 24.6% of respondents, respectively. Females accounted for 61.4% of the physicians.

Table 1: Physician survey on informed consent for blood transfusion.

Have you been involved in a transfusion consent process before?
In your opinion, is the consent process for blood transfusion needed?
Please provide an overall grade on the importance of the new transfusion consent policy out of 10 (0 being not important, 10 being very important).
In your opinion, should the consent prior to blood transfusion be made mandatory?
How comfortable are you in obtaining the consent prior to transfusion of any blood components?
Have you read the SQUH transfusion consent policy?
Do you think the new transfusion consent procedure form adds some knowledge to the patients who undergo the consent process?
How did you find the patients' acceptance of the transfusion consent process?
Do you explain benefits of blood transfusion when taking transfusion consent?
Do you explain risks of blood transfusion when taking transfusion consent?
Do you explain alternatives to blood transfusion when taking transfusion consent?
How frequently do you encounter questions from the patients when obtaining transfusion consent?
Which group of patients is more difficult to take the transfusion consent from?
Do you think the transfusion consent policy should be applied in other hospitals?

SQUH: Sultan Qaboos University Hospital

Table 2: Demographics of surveyed physicians, n = 114.

Demographics	n (%)
Specialty	
Anesthesia	8 (7.0)
Obstetrics and gynecology	15 (13.2)
Hematology	19 (16.7)
Internal Medicine	19 (16.7)
Pediatrics	25 (21.9)
Surgery	28 (24.6)
Gender	
Females	70 (61.4)
Males	44 (38.6)
Seniority	
Interns	43 (37.7)
Residents	28 (24.6)
Senior House officers	13 (11.4)
Registrars	30 (26.3)

The importance of the transfusion consent process was acknowledged by 80% of the surveyed physicians, who supported its implementation in other hospitals (mean grade of importance given 7.02±2.92 out of 10). Moreover, 82% of the surveyed physicians thought that the process adds knowledge to the patients prior to transfusion. There was no statistically significant association between the opinion on the consent importance and the physician seniority ($p = 0.444$), nor with their specialties ($p = 0.537$). Moreover, there was no statistically significant difference in the mean grades given with regard to the importance of the transfusion consent between the physicians' seniority levels ($p = 0.512$).

About 50% of the physicians declared that they had read the implemented transfusion consent policy. There was no statistically significant association between the physician seniority and their knowledge about the policy ($p = 0.177$). The benefits and risks of blood transfusion were explained regularly by 91% and 87% of the surveyed physicians, respectively. That said, 38% of the surveyed physicians declared that alternatives to blood transfusion were discussed. Discomfort with the transfusion consent process was reported by 10% of the surveyed physicians. There was no statistically significant association found between the discomfort in obtaining the transfusion consent and the seniority of the physicians ($p = 0.801$), nor with their specialties ($p = 0.623$).

Only 3% of the surveyed physicians admitted poor patients' acceptance to the transfusion consent process. About 63% of the physicians admitted frequent inquiries by the patients around the transfusion consent process, while 35% admitted occasional questions. There was no statistically significant association between the physicians' seniority and the patients' acceptance to transfusion consent ($p = 0.065$). A third of the physicians declared difficulties of obtaining the transfusion consent from the parents or patients' guardians.

DISCUSSION

Over recent years, there has been a shift towards patient involvement in medical treatment. Despite that, there have been inconsistencies reported in the practice of obtaining consent for blood and blood components transfusion. Despite being mandatory in some countries, in others, obtaining specific consent for a transfusion remains a novel concept. This was certainly the case in Oman until the transfusion consent policy and process was implemented in our institution.

The physician survey highlighted interesting findings on the physicians' perception of the transfusion consent process. The majority of the surveyed physicians thought that the process added to patient's knowledge, and gave a strong recommendation to have this policy applied in other institutions in Oman. The grade of importance given to the transfusion consent process was irrespective of the physician's seniority level. This could signify an increase in the physicians' awareness of patients' autonomy with regard to medical treatment in general, or a specific understanding of the importance of having such policies in place from a medicolegal perspective. Moreover, it can signify the awareness of risks of transfusion as highlighted by other physicians' surveys.[5]

Our data shows an excellent physicians' perception of patients' acceptance of the consent and of the discussion of benefits and risks of blood transfusion. That said, details of what has been assessed and degree of patients' comprehension of the provided information has not been addressed in our survey and will need to be assessed. Informed consent for blood transfusion presumes that the patient has been "informed", meaning they have been given sufficient information, were able to comprehend the information given to them, and had the opportunity to ask questions before making

a decision. In addition, patients need to "consent", meaning that the patient need to agree to undergo the intervention with all information provided to them. There is paucity of published data to determine the level of information available to patients at time of obtaining transfusion consent, and their level of understanding of the details given during the consent process.[7] Our study sets the ground for further assessment of this aspect in the future.

The survey highlighted a drawback in discussing alternatives to blood transfusion, and raises the need to address the reasons behind this finding and physicians' awareness of existing alternatives. This will help in planning further education of existing alternatives to physicians across all grades of the profession. Alternatives to transfusion fall into two primary categories: those which substitute for some function of the blood or one of its components, and others which obviate the need for the transfusion of blood or one of its components. These include autologous donations, directed donations and early correction of anemia using iron replacement and use of erythropoietin injections.[8] A previous survey showed similar findings, which raises the need for proper blood management programs in different institutions.[5,9,10] The results of this survey were presented to the hospital blood transfusion committee to plan needed actions in this regard.

The survey also highlighted physicians' discomfort in discussing transfusion risks. It is recommended that patients should be informed of transfusion risks that are frequent (1% or greater), even if they are mild, since they are likely to occur.[4] The classic examples are febrile reactions and allergic reactions.

Other risks that are not as common may or may not be disclosed, unless they have an impact on morbidity and mortality (e.g., transfusion transmitted infections).[4] However, patients need to be informed of the low risk of transmission with all the safeguards in place in donor selection and testing, and to put these risks in the context of the patient's illness, and the risks of not being transfused.[11] This is especially important bearing in mind that the risks of a transfusion are usually far less than the risks of other medical or surgical procedures.[4] This survey also mandates the need for further research on transfusion risk rates in our region, in order to set a ground of reference for the physicians during the consent process.

Our study has several strengths. Herein, we assess the first experience of application of the transfusion consent in Oman. This is the first study locally and in the region that investigates the healthcare providers' attitudes toward transfusion consent. The physicians' survey results raise the importance of implementing transfusion policy in other hospitals in the country. A few limitations of this study should be considered. First, the generalizability of this study may be limited since subjects consisted of physicians from a single institution. That said, transfusion consent was only implemented in our institution at the time of writing this manuscript, and therefore the extent to which these findings can be replicated in a wider physician population remains to be determined pending application of the policy in other hospitals. Second, at the time of the study, it had not been a long time since the blood transfusion consent policy was introduced, and would require further education of the physicians before a better level of understanding could be achieved. Third, the results of the survey were mainly from junior staff, and may not represent all physicians in the hospital. However, junior physicians are often heavily involved in the consent procedures, which highlights the need to have a structured, focused education in this aspect in the early years of practice.

CONCLUSION

We advocate the implementation of the transfusion consent process in other hospitals in the country and the region as a vital step towards patient autonomy. To achieve the full potential of shared decision-making, greater efforts should be made to provide information to patients about the risks and benefits of blood transfusions. Implementation of the information pamphlets is in process, and should be followed by a second survey to assess the effectiveness of this upgrade phase of the policy implementation.

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