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ORIGINAL ARTICLE

Treatment of large persistent tracheoesophageal peristomal fistulas using silicon rings☆

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KEYWORDS
Voice prosthesis;
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Abstract
Introduction: Tracheoesophageal peristomal fistulae can often be solved by reducing the size of the fistula or replacing the prosthesis; however, even with conservative techniques, leakage around the fistula may continue in total laryngectomy patients. Also, several techniques have been developed to overcome this problem, including injections around the fistula, fistula closure with local flaps, myofascial flaps, or free flaps and fistula closure using a septal perforation silicon button.
Objective: To present the results of the application of silicon ring expanding the voice prosthesis in patients with large and persistent peri-prosthetic fistula.
Methods: A voice prosthesis was fitted to 42 patients after total laryngectomy. Leakage was detected around the prosthesis in 18 of these 42 patients. Four patients demonstrated improvement with conservative methods. Eight of 18 patients who couldn't be cured with conservative methods were treated by using primary suture closure and 4 patients were treated with local flaps. As silicon ring was applied as a primary treatment in the 2 remaining patients and also, applied to 2 patients who had recurrence after suture repair and to 2 patients who had recurrence after local flap implementation. Silicon rings were used in a total of 6 patients due to the secondary trachea-esophageal fistula. Patients were treated with provox-1 initially and later with provox-2. At the time of leakage around the fistula, 6 patients had provox-2.
Results: Fistulae were treated successfully in 6 patients, and effective speech of patients was preserved. Patients experienced no adaptation problem. Prosthesis changing time was not different between silicon rings expanded and normal prosthesis applied patients. Silicon ring combined voice prosthesis was used 26 times; there was no recurrence in fistula complication during 29 ± 6 months follow up.

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Conclusion: Silicon rings for modified expanded voice prosthesis seems to be an effective treatment for persistent peri-prosthetic leakage, for both, fistula closure and preserving the patients speech.

PALAVRAS-CHAVE
Prótese vocal;
Anel de silicone;
Fistula

Tratamento de fístula periestomal traqueoesofágica grande e persistente com anéis de silicone

Resumo
Introdução: Fístulas traqueoesofágicas persistentes podem ser resolvidas através da redução do tamanho da fístula ou substituição da prótese; no entanto, mesmo com técnicas conservadoras, o pertuito em torno da fístula pode continuar em pacientes com laringectomia total. Além disso, várias técnicas têm sido desenvolvidas para superar esse problema, incluindo injeções ao redor da fístula, fechamento da fístula com retalhos locais, retalho miofasciais, ou retalhos livres e fechamento da fístula usando um botão septal de silicone.
Objetivo: Apresentar os resultados da aplicação de anel de silicone para expansão da prótese vocal em pacientes com grandes fístulas periprotéticas persistentes.
Método: Prótese vocal foi colocada em 42 pacientes após laringectomia total, e fístula foi detectada ao redor da prótese em 18 desses 42 pacientes. Quatro pacientes obtiveram melhora com métodos conservadores. Oito dos 18 pacientes que não obtiveram sucesso com métodos conservadores foram tratados usando sutura primária e quatro pacientes foram tratados com retalhos locais. Um anel de silicone foi aplicado inicialmente nos dois pacientes restantes e, também, aplicado a dois pacientes que tiveram recorrência após a técnica de sutura e a dois pacientes que tiveram recorrência após a utilização de retalho local. No total, seis pacientes receberam anéis de silicone em decorrência da fístula traqueoesofágica secundária. Os pacientes haviam sido tratados com provox-1 inicialmente e posteriormente com provox-2. No momento detecção da fístula em torno do estoma, seis pacientes haviam recebido provox-2.
Resultados: A fístula foi tratada com sucesso em seis pacientes. Além disso, após o tratamento a fala foi mantida de forma eficaz nos pacientes. Não houve problema de adaptação. O tempo de troca da prótese expandida com os anéis de silicone não foi diferente do tempo que se leva para a colocação da prótese normal. O anel de silicone combinado com a prótese vocal foi usado 26 vezes em pacientes na época da troca de prótese e não houve recorrência da fístula durante os 29 ± 6 meses de acompanhamento.
Conclusão: Os resultados sugerem que em casos de grandes fístulas peri-prostéticas persistentes, anéis expandidos de silicone e prótese vocal modificada, são eficazes tanto para o fechamento da fístula como para a manutenção da fala do paciente.

Introduction

One of the most important problems of patients who have undergone total laryngectomy is loss of speech. A voice prosthesis can solve the problem in most patients; however, there can be numerous complications, including a peristomal fistula.[1–4] This frequent complication can result in severe morbidity, including aspiration pneumonia and malnutrition, or even mortality.[5–7]

Such problems can be solved by reducing the size of the fistula or replacing the prosthesis; however, even with conservative techniques, leakage around the fistula may continue. Several techniques have been developed to overcome this problem, including injections around the fistula[8–11]; fistula closure with local flaps,[12] myofascial flaps,[1,13,14] free flaps;[1,5] and fistula closure using a septal button.[6,13]

The problems caused by small fistulas (5–10 mm) are easier to overcome compared to those caused by large fistulas; indeed, it may not be possible to solve the problems caused by large fistulas, and complications such as speech loss and morbidity may result from intervention.

Here, we report the application of a silicone ring expanded voice prosthesis in patients who had a large-sized fistula and persistent peri-prosthetic leakage.