Reduction of Catheter Related Bloodstream Infection in nephrology unit
Quality Versus Cost

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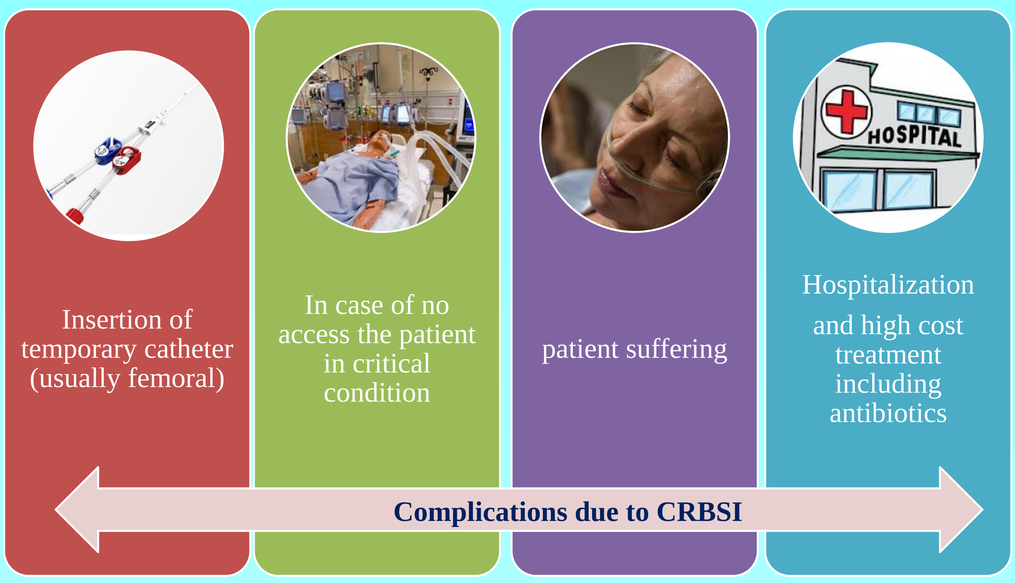
Introduction

Central venous catheters (CVCs) are frequently used as vascular access for patients who require hemodialysis, but infectious complications remain a major clinical problem.
In Haemek medical center 45 % of the patients (N= 80) have central line catheter, it is considered a major risk factor for sepsis in hemodialysis patients, increasing the risk of morbidity and mortality.
The financial impact of caring for hospitalized patients with CVCs encompasses a range of costs, including CVC insertion, nursing labor time and treatment of any local infections and catheter related bloodstream infections (CRBSI), which can cost over 20.000 shekels (5260 dollars) per episode.

We used to change the hypordress dressing 3 times a week before every treatment.
This dressing is not waterproof; therefore as known can lead to infection.
In the last few years dialysis clinics in different countries have managed to reduce the infection in central catheter through multidisciplinary interventions using chlorhexidine gluconate dressings (CHG), even though it is more expensive than the hypordress (Sterile Wound Dressing).
This dressing has chlorhexidine gel which provides antimicrobial protection, visible which allows active surveillance and promotes moisture evaporation.
In December 2011 the Israeli ministry of health published the guidelines for prevention of CRBSI. The guidelines mentioned that one of the methods proven to be effective in reducing CRBSI is using chlorhexidine gluconate dressing.



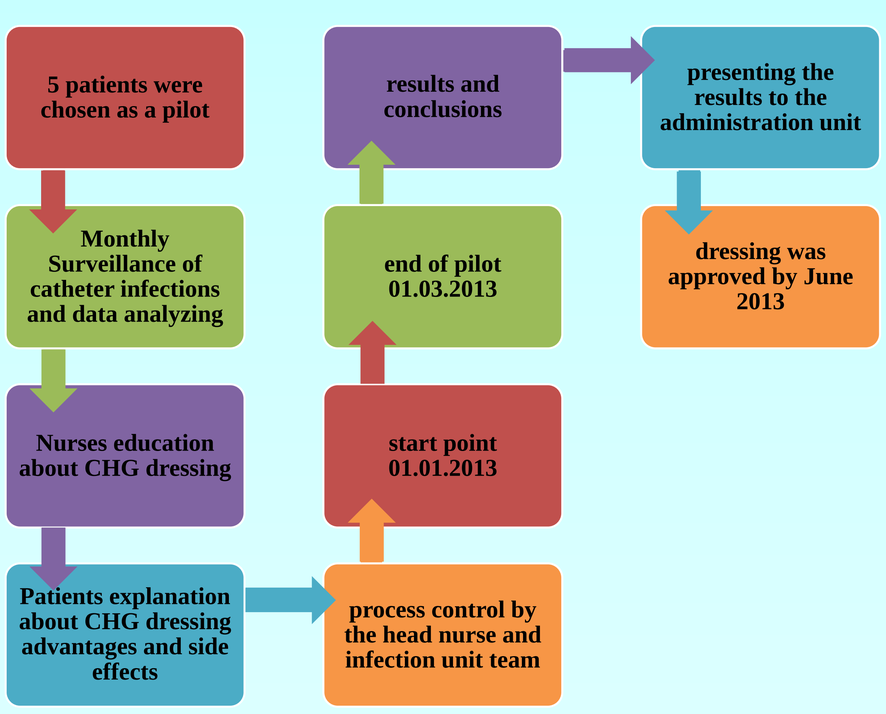
Purpose of the study

Reducing CRBSI's in patients undergoing dialysis by using chlorhexidine gluconate dressing.
As we mentioned before the CHG dressing is expensive therefore our goal was to prove to the administration of the hospital the necessity of this dressing to the treatment regardless of its cost.

Methods

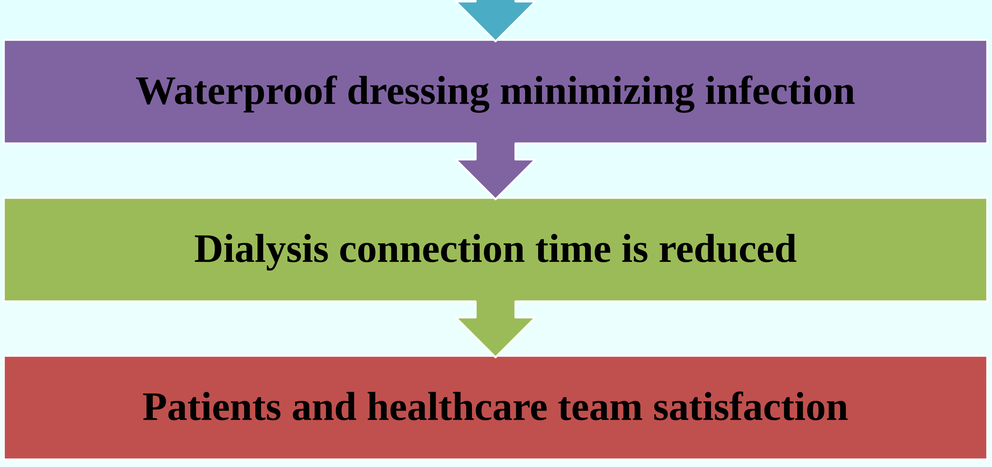
Monthly meetings in collaboration with dialysis unit, administration and infection unit in order to examine cost effectiveness of the dressing.
We analyzed the central line infection cost which includes hospitalization days, antibiotics, central line exchange, loss of working days for patient and care giver, nurse labor time versus annual cost of dressing.

Pilot of using CHG dressing – changing the dressing once a week instead of 3 time a week.

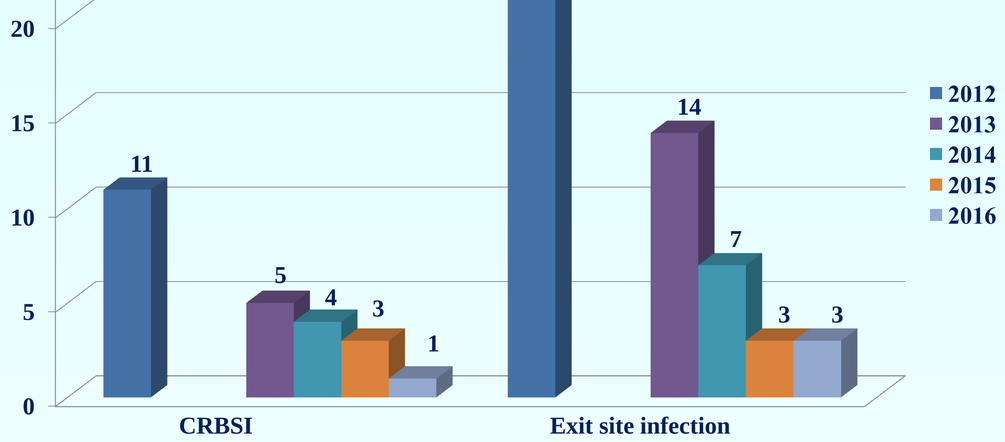


Chlorhexidine Gluconate Dressing

Results



CRBSI and exit site infection
2012-2016



Note: In 2016 the data until June

Conclusion

Using this dressing has proved to be effective in reducing bloodstream and exit site infections, increasing benefits both for patients and dialysis unit despite the cost.
Economic aspect: saving equipment costs, inpatient days, and medication costs.
Nursing aspect: improving catheter exit site surveillance and exchanging exit site dressing once a week instead of 3 times.

By using CHG dressing benefits exceeds the cost