

Cervical cancer screening outcomes among female kidney transplant recipients: a retrospective cohort study using Texas Medicare data

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BACKGROUND

- Kidney transplant recipients (KTRs) have elevated risks of HPV-related cervical pre-cancers and cancer due to immunosuppression.
- Society guidelines recommend more frequent cervical cancer screening for female KTRs.
- No specific guidelines for the management of low- and high-grade squamous intraepithelial lesion (LSIL, HSIL) for KTRs or other immunocompromised patients.
- Management strategies include observation or treatment with excision or ablation. Hysterectomy may also be performed but is not considered a primary treatment.
- Little is known about the rates of abnormal cytology results and how abnormal findings are managed in real-world settings.

Objectives: (1) to assess the rates of abnormal cytology test results and (2) to characterize cervical dysplasia management strategies in KTRs.

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METHODS

- Using 100% Texas Medicare data, we identified female KTRs 18-65 years old with a transplant between 2001-2017. International Classification of Diseases, Ninth and Tenth Revision (ICD-9 and ICD-10) procedure codes and Current Procedural Terminology (CPT) codes were used to identify KTRs.
- KTRs with at least one cervical cancer screening exam post-transplant were included. We excluded KTRs with less than one year of continuous enrollment before the transplant date, those with any history of HSIL or cervical cancer, and those with a history of a hysterectomy.
- The study outcome was abnormal cervical cytology results: low-grade squamous intraepithelial lesion (LSIL), high-grade squamous intraepithelial lesion (HSIL), or cervical cancer.
- We examined the use of diagnostic excisional procedures (cervical conization, cone biopsy, loop electrosurgical excision procedure, and large loop excision of the transformation zone), ablation procedures (cryosurgery, laser ablation), and hysterectomy in the 6- and 12-months after the cervical dysplasia diagnosis.

RESULTS

- We identified 1,580 KTRs enrolled in Texas Medicare at the time of their transplant and with at least one cervical cancer screening exam post-transplant.
- The mean age at transplant was 44 years (standard deviation, 11.4 years). We identified a diverse cohort: 420 (27%) were Non-Hispanic Black, 384 (24.3%) were Hispanic, 648 (41%) were Non-Hispanic White, and 128 (8.1%) were Non-Hispanic and another race.
- The average time between the date of the transplant and the date of the first LSIL or HSIL diagnosis was 3.7 years.

RESULTS (cont'd)

Table 1. Management/treatment strategies for KTRs diagnosed with LSIL post-transplant (N=204).

	6 months post-LSIL diagnosis (N, %)	12 months post-LSIL diagnosis (N, %)
Excisional procedure	13 (6.4)	15 (7.4)
Ablative procedure	7 (3.4)	8 (3.9)
Hysterectomy	1 (0.5)	2 (1.0)
No treatment	183 (89.7)	179 (87.7)

Table 2. Management/treatment strategies for KTRs diagnosed with HSIL post-transplant (N=60).

	6 months post-HSIL diagnosis (N, %)	12 months post-HSIL diagnosis (N, %)
Excisional procedure	20 (33.3)	22 (36.7)
Ablative procedure	3 (5.0)	3 (5.0)
Hysterectomy	2 (3.3)	6 (10.0)
No treatment	35 (58.3)	29 (48.3)

CONCLUSION

- Cervical dysplasia post-transplant is prevalent, with more than 1 in 10 female KTRs with cervical cancer screening with an LSIL or HSIL diagnosis.
- Management of abnormal findings varied, with a majority having an excisional procedure or a hysterectomy for HSIL.