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Clinical and Radiographic Predictors of Outcomes in Spontaneous Intracerebral Hemorrhage: A Prospective Study

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AIMS

1. To identify clinical predictors of poor outcome in ICH
2. To assess radiographic markers (hematoma volume, spot sign, NCCT signs)
3. To evaluate functional outcome (mRS) at discharge, 30 & 90 days

MATERIAL AND METHODS

Study Design & Duration (prospective, hospital-based, 18 months)

Sample & Inclusion (n=185, age ≥18, no secondary ICH)

Data Collection (demographics, BP, GCS, CT/CTA, mRS)

Follow-Up: Outcomes (mRS, mortality) at discharge, 30 days, 90 days]

Statistical Analysis (multivariate regression, predictors of poor outcome)

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RESULTS

Baseline Demographic and Clinical Parameter	
Characteristic	**Total (N=185)**
Age (years)	56.0 ± 12.4
Male	123 (66.5%)
mRS Score at Admission	5 (4–5)
Systolic BP (mmHg)	164.9 ± 27.1
Hypertension History	134 (72.4%)
Diabetes Mellitus	61 (33.0%)

Key Predictors of Unfavorable Outcomes in Spontaneous ICH				
Characteristic	**Total (N=185)**	**Unfavorable (N=69)**	**Favorable (N=116)**	**p-value**
Hematoma Volume (mL)	26.7 ± 23.7	39.9 ± 28.0	18.8 ± 16.4	<0.001
Intraventricular Extension	57 (30.8%)	37 (53.6%)	20 (17.2%)	<0.001
Irregular Hematoma Shape	94 (50.8%)	46 (66.7%)	48 (41.4%)	<0.001
Satellite Sign	104 (56.2%)	53 (76.8%)	51 (44.0%)	<0.001
Hydrocephalus	50 (27.0%)	32 (46.4%)	18 (15.5%)	<0.001
Herniation	64 (34.6%)	42 (60.9%)	22 (19.0%)	<0.001
GCS Score at Baseline	12 (9–15)	9 (7–13)	14 (11–15)	<0.001
ICH Score at Baseline	1 (0–2)	2 (1–3)	1 (0–1)	<0.001

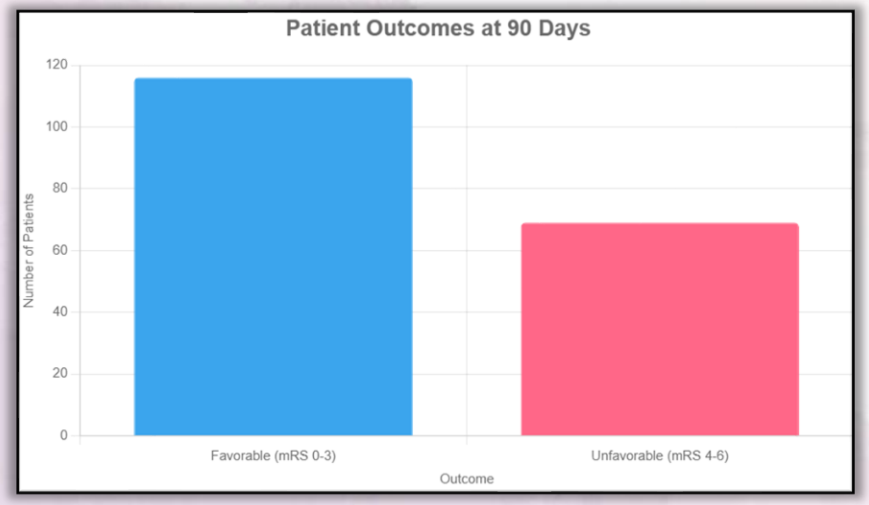

Fig 1:Distribution of Patient Outcomes at 90 Days: Favorable vs. Unfavorable

Multivariable Analysis: Independent Predictors of Unfavorable Outcomes			
Variable	**Odds Ratio (OR)**	**95% CI**	**p-value**
Male Gender (vs. Female)	13.302	1.756–100.768	0.012
Spot Sign (Yes vs. No)	54.267	5.821–505.903	<0.001
Herniation (Yes vs. No)	14.976	2.465–90.968	0.003
ICH Score	5.739	1.166–28.241	0.032

Fig 2: Post contrast Axial CT image of brain shows spot sign (Yellow arrow)

DISCUSSION

- The **demographic profile** reflects younger onset & male predominance in NE India, consistent with Indian studies.[1,2]
- **Risk Factors** includes Hypertension, DM, smoking,& alcohol use are prevalent, mirroring regional patterns; poor rural healthcare access worsens outcomes.[3]
- **Radiographic Predictors** with Larger hematoma volume, IVH, & spot sign strongly predict poor outcomes (mRS 4–6), aligning with global data.[4,5]
- **Clinical Predictors** with Lower GCS, higher ICH score,& male gender are independently linked to unfavorable outcomes, consistent with Indian and international studies.[6,7]

CONCLUSION

1. Hematoma expansion signs predict poor ICH outcomes (mRS >3).
2. Radiographic signs enable risk stratification.
3. Poor prognosis linked with key modifiable risk factor.
4. Lower GCS and higher ICH/mRS scores at admission strongly correlate with unfavorable outcomes.
5. Need for early diagnosis and CT access.

REFRENCES

[1]Misra UK, et al. J Stroke.,[2]Dhamija RK, et al. Indian J Med Res.
[3]Kamalakannan S, et al. Stroke Res Treat.,[4]Broderick JP, et al. Stroke.
[5]Wada R, et al. Radiology.,[6]Hegde A, et al. Neurol India.
[7] Hemphill JC, et al. Stroke.